

# *Women's Labor Market Involvement and Family Income Mobility When Marriages End*

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The last 30 years have seen a dramatic change in women's social and economic status in the United States, particularly their labor market activity. Labor force participation rates for women have increased steeply, with especially sharp increases for married women with young children; over the same decades, participation rates of men have declined slightly. Women have raised their educational attainment so that high school and college graduation rates for women equal or exceed those for men. And entry by women into traditionally male occupations, especially in professional and other white-collar jobs, has considerably narrowed the differences between the sexes in the sorts of work they do. As a result of these changes, the gender pay gap has shrunk.

When women were less involved and less successful in the labor market, many of them (and their children) gained access to market income only or primarily through marriage or cohabitation with a working man. Even when wives also worked, their contributions to family income were modest, on average. As a result, women and children were especially vulnerable to the death of a partner, separation, or divorce. The loss of a husband and his income often meant a precipitous decline in economic wellbeing, with many families falling near or into poverty. By contrast, husbands were less economically vulnerable, since the loss of a wife did not usually result in a significant decline in family income.

As women's labor market activity increased, one might expect to see these family mobility outcomes attenuated. Women with greater labor market involvement are likely to have higher earnings and make larger contributions to family income even if their husbands continue to be the primary earners. When a marriage ends, they may have greater capacity

to replace lost income than women not working outside the home, thereby reducing their families' economic vulnerability. By the same token, men and their families would seem to be more economically vulnerable to the loss of a wife when her earnings constitute more of the family income.

Using data from the Panel Study of Income Dynamics from 1969 to 1998, this paper looks at the relationship between women's labor market activity and the family income mobility of married-couple families that lose a spouse through death, divorce, or separation. We measure women's labor market involvement (employment rates, annual hours of work, earnings per hour) at the beginning and end of three decades—the 1970s, 1980s, and 1990s—and examine whether greater labor market activity improves the mobility outcomes for families losing a husband and worsens the outcomes for families losing a wife. We also expect post-dissolution mobility outcomes to improve for women and their families and to deteriorate for men and their families over successive decades, along with the increase in the share of family income accounted for by wives' earnings.

We find, in all three decades, wives' labor market activity acts as partial insurance for women and their families against the negative economic consequences of marital dissolution. Upward mobility for families losing a husband is associated with higher initial labor earnings of wives and increases in those earnings during the decade, especially with increases in annual work hours. However, despite this result, the number of upwardly mobile families is still quite small, and a large number of families actually move down into the lowest two quintiles by the end of each decade. At the same time, the increasing initial labor market activity of women worsens the post-dissolution mobility outcomes for families losing a wife. These findings imply that U.S. social and economic policies currently leave considerable gaps in "insurance" for families in the event of marital dissolution.

## I. Background

An extensive economics literature models labor supply, and many researchers have incorporated family considerations into those models. Thus, they have attempted to model the way individuals make decisions about how to allocate their time among paid work, housework (or "home production"), and leisure. For married-couple families, preferences and labor market opportunities (wages, hours, job content) of

both partners matter, as do other sources of income and family assets. Each person's labor supply responds positively to an increase in his or her own market wages and opportunities, but its responsiveness to the market wages and opportunities of the spouse is still in debate.<sup>1</sup> Increased education raises the returns to working and is positively related to labor supply. Although children increase the desired levels of home and market production, labor supply for at least one member of the couple is likely to be negatively related to their presence and number.<sup>2</sup> All of the fac-

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*Factors such as preferences, wages, job opportunities, educational attainment, and presence of children enter into a husband's and wife's decision making and determine their respective labor supplies.*

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tors enumerated above—preferences, wages, job opportunities, educational attainment, and presence of children—enter into a husband's and wife's decision making and determine their respective labor supplies, including whether to work, number of work hours, and type of work.

When a marriage dissolves through separation or divorce, changes in these factors—particularly the availability of the former spouse's income—may cause both partners to adjust their labor supply.<sup>3</sup> However, the increase in post-dissolution labor supply is typical-

<sup>1</sup> The two major classes of models of intrafamily choice—household production models and bargaining models—result in different predictions about whether an increase in a husband's (wife's) opportunities will result in an increase, decrease, or no change in the wife's (husband's) labor supply (Lundberg and Pollak 1996). Even bargaining models differ on whether, for example, shifts in divorce laws that decrease wives' bargaining position within marriage should increase or decrease wives' labor supply (Gray 1998).

<sup>2</sup> For example, Juhn and Murphy (1997) find that the presence of children aged one to six lowers the wife's employment rate about 20 percentage points.

<sup>3</sup> In this paper, we take the dissolution of the marriage as given. We do not investigate the impact of husbands' and wives' labor market activity on marital dissolution. Other researchers who ask whether economic variables such as increased female wages or labor market activity reduce marriage or increase divorce find at most a small increase in divorce. See, for example, Johnson and Skinner (1986), Parkman (1992), Hoffman and Duncan (1995), Gray (1998), and Ressler and Waters (2000).

ly larger for women than men because men's earnings have historically accounted for a large fraction of family income; thus the loss represents a significant decline in family resources. The extent to which women increase their earnings will have a major impact on post-dissolution family income and economic wellbeing.

Judging the degree to which post-dissolution changes in labor supply and income improve the wellbeing (or utility) of individuals and families is complicated by both the difficulty in valuing household production and the extent to which post-dissolution arrangements are voluntary choices on the part of the married-couple partners.<sup>4</sup> In particular, comparisons based only on income relative to a standard measure of need (that is, adjusting for family size and composition, but not for the value of household production such as child care or leisure) will overstate the improvement in wellbeing that results from a single mother's shift of some hours from household production to market work. Similarly, such comparisons will understate the deterioration in wellbeing experienced by a newly-separated father who works full time but now has custody of his children. Additionally, evaluations of wellbeing do not adjust for changes in utility that come directly from a separation or divorce (where one or both partners may want the split) or from who retains custody of the children (where one or both partners may want the children). However, most previous research either explicitly or implicitly assumes that income adjusted for needs is a rough indicator of consumption possibilities and, therefore, a reasonable proxy for economic wellbeing.

Much of the modeling and conceptual work on labor supply in a family context focuses on married-couple families, where the issues are most complex because there are two potential decision makers who may have different preferences. But a great deal of empirical work looks at marital dissolution because it is a time of considerable economic vulnerability. Even after any post-dissolution labor supply response, one might well expect to see a decline in economic wellbeing for *both* husbands and wives, since total family income now must support two households. Yet, most studies find that women tend to be more at risk economically than men when a marriage dissolves. Historical patterns of less education, less work experience, and lower wages for women, reinforced by the traditional division of responsibility of child care and other household production, have meant that women are typically unable to replace their husbands' incomes.

Thus, widows tend to see income fall more than needs, while widowers see a relatively smaller decline in income (Holden and Smock 1991). In instances of divorce, women are far more likely than men to be the custodial parent, particularly if the children are young, exacerbating the decline in income relative to needs (Smock 1993; Holden and Smock 1991). For example, Page and Stevens (2002) find that one to two years after a divorce, the net loss of fathers' income (earnings minus the cost of child support) reduces family income by about 73 percent. Although mothers' increased earnings cushion this loss, it is only enough to compensate for about 10 percent of the lost income. Even among low-income and minority families, where men have not fared well economically in recent decades, women's post-disruption wellbeing is lower than men's (Smock 1994).

The losses that men experience after losing a wife are smaller. Some studies find that men who lose a wife through either separation or divorce experience an increase in economic wellbeing. Although family incomes decline with the loss of wives' earnings and, in some cases, the payment of alimony or child support, the drop is more than compensated for, on average, by the reduction in "needs" that results from not having custody of their children (Holden and Smock 1991; Smock 1993, 1994; Peterson 1996; Duncan and Hoffman 1985). Others find a decline in men's living standards, but the drop is far less than that experienced by women (Burkhauser et al. 1990; Burkhauser 1991).

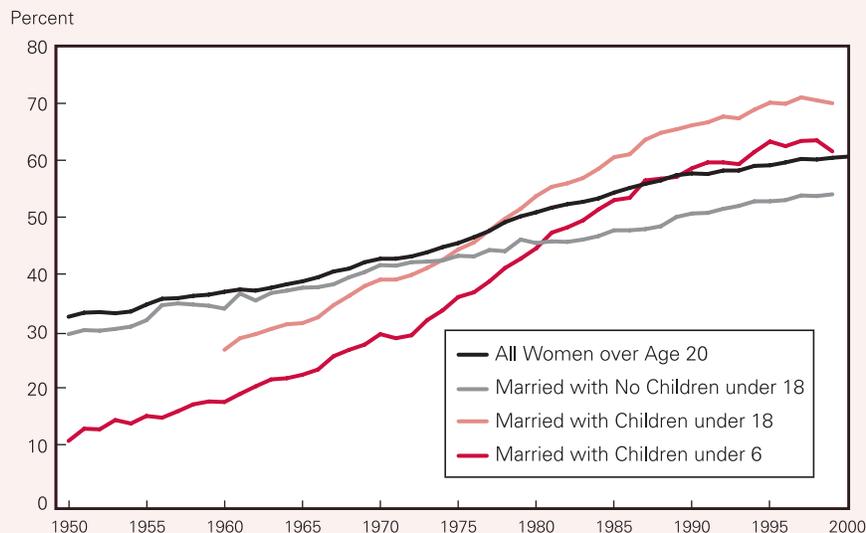
Page and Stevens (2002), using Panel Study of Income Dynamics data from 1968 to 1993, estimate the short-run and long-run economic cost of separation or divorce for children aged 16 years and under. They find that in the year following divorce, family post-tax income for these children falls by one-third, and food consumption by almost as much.<sup>5</sup> They also find that over the next six years, only about half of that loss is recouped. Furthermore, much of the recovery is due to remarriage, as about 30 percent of divorced parents in the sample remarry within six years. Among the children in their sample whose custodial parent does not remarry within the period, the post-tax family income six-plus years after the divorce is 40 percent lower than if the divorce had not taken place.<sup>6</sup> Even food con-

<sup>4</sup> It is also complicated by differential effects on wellbeing from additional income versus work (see, for example, Phillips 2002).

<sup>5</sup> Their published estimates refer to dollar income, either pre-tax or post-tax, and their regressions control for family size. They report that when they use an income-to-needs ratio as the dependent variable, the results are very similar to their income results.

Figure 1

### Labor Force Participation Rates of Women, 1950-2000



Source: Bureau of Labor Statistics; *Handbook of Labor Statistics*, June 1985 and August 1989; and *Handbook of U.S. Labor Statistics*, 4th edition, 2000.

sumption, which shows greater recovery than income, continues to be an estimated 17 percent lower than if no divorce had occurred.

The size and significance of these economic losses for women and children result primarily from married-couple families' historical dependence on husbands' earnings in conjunction with typical child-custody arrangements after the marriage breaks up. But the past 30 years have seen large changes in women's labor market involvement, which one would expect to be associated with a decline in such dependence.

The labor force participation rate of women has risen markedly in the last several decades, and especially so for women with children (see Figure 1).<sup>7</sup> Work hours and work experience also rose. Notes Waldfogel (1998), "It was only in the 1970s and thereafter that women in large numbers began staying in the labor market more continuously over the period of marriage and childbearing" (p. 138). Women's educational attainment increased, and, by the early 1990s, high school and college graduation rates mirrored or exceeded those of men. The range of jobs open to women expanded significantly over the period, and women increasingly entered traditionally male occupations, notably professional and managerial occupations. As a result, women's real wages and earnings increased.<sup>8</sup>

While women were increasing their labor market activity, many men were reducing theirs. Labor force participation rates for men declined slightly overall, and more than slightly for older men and those with less education.<sup>9</sup> Men's work hours also declined, on average. Moreover, men's wages barely rose in real terms since 1970, and rose far less than those of women. All these changes combined to reduce the female-male wage gap (see Figure 2).<sup>10</sup>

Thus, in a variety of ways, women have become more involved and more successful in the labor market over the past three decades. The fraction of family income that their earnings represent has risen, on average, among all families and in married-

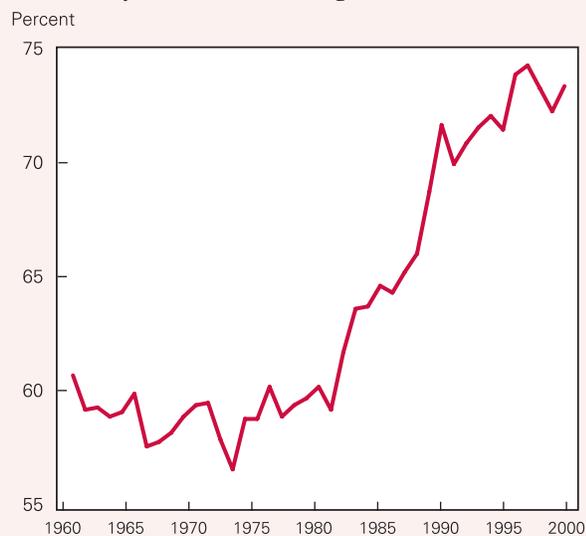
couple families, although it remains below the male fraction. Moreover, Smock (1994) finds that women's previous labor market involvement improves their earnings after marital disruption. Thus, women's increased labor market involvement is likely to have changed the economic prospects for families losing a spouse.

<sup>6</sup> These figures are roughly consistent with estimates from previous studies such as Duncan and Hoffman (1985) and Weiss (1984). Page and Stevens's fixed-effect approach controls for family characteristics, which makes their short-term estimates of the impact smaller than those provided by cross-sectional comparisons of divorced and intact families; however, they also take life-cycle earnings growth into account, which tends to increase their estimates compared to earlier studies. See also Smock, Manning, and Gupta (1999). Using different data and methodology for dealing with these selection issues, they estimate that women who divorce and remain single have family income of about half of what would occur if they remarried and about two-thirds of what would occur if they had remained married.

<sup>7</sup> Increases in labor force participation rates of married women go back as far as the 1920s (Costa 2000). Goldin (1990) documents participation increases in urban areas both within and across cohorts before 1970. For an outstanding review of trends in women's labor market activity since 1975, see Blau (1998). For women's increasing hours of work, see Cohen and Bianchi (1999), DiNatale and Boraas (2002), and Coleman and Pencavel (1993b). Blau and Kahn (1997) document increases in experience, as does Waldfogel (1998). For educational attainment, see Kodrzycki (2002). For the decline in occupational segregation, see Blau, Simpson, and Anderson (1998), Jacobs (1999), and DiNatale and Boraas (2002).

Figure 2

### Women's Earnings as Percent of Men's Earnings, 1960-2000



Note: Based on median earnings of full-time, full-year workers aged 15 and older.  
 Source: U.S. Census Bureau, Current Population Survey, Table P-40, downloaded from <http://www.census.gov/hhes/income/histinc/p40x1.html>.

We investigate the link between labor market involvement and family income mobility in the remainder of this paper. First we look at mobility outcomes for families losing a spouse in three decades, the 1970s, the 1980s, and the 1990s. How many families manage to move up or hold their position in the family income distribution in spite of losing one adult member who may have earnings? How pronounced are the differences in mobility between families losing a husband and families losing a wife? Because of women's generally rising labor market involvement in the economy, we expect families losing a husband to experience better mobility outcomes in later rather than earlier decades; we expect the reverse for families losing a wife.

<sup>8</sup> Blau (1998) reports that between 1969 and 1994, the real weekly wages of full-time women workers rose 31 percent.

<sup>9</sup> For men's labor force participation and real weekly wages, see Blau (1998). For men's work hours, see Coleman and Pencavel (1993a).

<sup>10</sup> See also Blau (1998) who finds that the female-male gap in mean weekly wages for full-time workers aged 25 to 64 fell from 44 percent in 1969 to 28 percent in 1994. Also, Blau and Kahn (2000) find that the gender gap for hourly wages of full-time workers aged 18 to 64 fell from 35 percent in 1978 to 22 percent in 1998.

Second, we examine the direct relationship between labor market involvement and mobility, with two simple hypotheses: Families in which the wife is more involved in the labor market (as defined by employment, hours of work, and wages) do *relatively better after losing a husband*, and *relatively worse after losing a wife* than those families in which the wife is less involved in market work.

## II. Methodology, Calculations, and Selected Sample Characteristics

We use data from the Panel Study of Income Dynamics (PSID) to address the questions raised and hypotheses outlined in the preceding section. The PSID is the only U.S. dataset to observe and follow individual families and family members over three decades.<sup>11</sup>

### Defining the Sample and Units of Observation

The PSID defines a family as any group of individuals sharing a household who are related by blood, marriage, or adoption. A single person living alone is also a family, while unrelated individuals sharing a housing unit (roommates) are classified as separate families, with the following exception: The PSID treats unmarried couples as a family unit if they are of the opposite sex and living together "permanently." Specifically, the PSID classifies the live-in partner as a "wife" or "husband" after she or he has lived with a sample member for more than a year. As we have adopted the PSID's definition of a family, we also treat these couples as married.<sup>12</sup>

The PSID follows all members of a set of original 1968 sample families to whatever living arrangements they experience. This means tracking family members who leave to form their own households, and collecting data on relatives with whom they live, including spouses and children. In the event of a divorce or

<sup>11</sup> The first survey was done in 1968. Public Release II (formerly "final release") data are available through the 1993 survey; Public Release I (formerly "early release") data are available through 1999. Income data collected in each survey refer to the previous calendar year; hence the most recent income data are for 1998. The data are annual through the 1997 survey and available every other year thereafter. A technical appendix describing our selection of sample among PSID observations, definitions, and variables is available on request.

<sup>12</sup> That is, hereafter in this article, the terms "couple" and "married couple" include those who are legally married and long-term cohabitators who are "married" according to the PSID. Similarly, divorce and separation refer to the dissolution of both legal marriage and long-term cohabitation.

death of a spouse, the PSID continues to survey original sample members and their children (including those born after 1968); the ex-wife or ex-husband of a sample member is not followed unless he or she is also a sample member. Each person is weighted to adjust the PSID sample to be representative of the U.S. population of families.

Following families over time is difficult both conceptually and in practice because family composition changes as individual family members come and go. Indeed, the focus of this paper, the loss of a spouse through death, separation, or divorce, is one such event that changes family composition. Thus, we base our analysis of family income changes on tracking “primary persons” and to each primary person, we attach data on the characteristics of his or her family. We define a primary person as a sample individual who is in the PSID sample at the beginning and end of a decade and maintains his or her own family or household, or who is the spouse of a family head. Primary persons include wives and husbands (and cohabiting “wives” and “husbands”) in couple families, as well as women and men maintaining households without a spouse (one-person households, those living with people to whom they are not related, and those heading families including their own children and/or other relatives).<sup>13</sup> The focus is on families headed by someone of working age; we exclude families in which no primary person is 65 or under at the end of the decade.

We do not impose a lower bound on the age of primary persons. Other researchers studying family income mobility have limited their analysis to people over 25 years of age in order to avoid classifying the drop in family income usually associated with a young person’s initial move out of his or her parents’ home as downward mobility. Using the criterion of primary person avoids this characterization (and also avoids it for those who leave the parental home after age 25), but does not exclude young people who are on their own before age 25 because, for example, they do not attend college right after high school. Including them has the advantage that their labor market experience before age 25 and the income patterns of the families they establish may differ noticeably from those who leave a parental home later, or from their own experience or income patterns after age 25.<sup>14</sup>

The samples of families we track are drawn separately for the three decades. That is, the sample for the 1969–79 decade includes all PSID families that existed in 1969 for which either the head or spouse meets our primary person criterion in both 1969 and 1979. The

sample is similarly selected for the 1979–89 and 1988–98 decades. We use 1988–98 rather than 1989–99 because 1998 is the latest year for which income data are available (1999 survey). These selections yield a sample of approximately 3,900 unweighted observations in the 1970s, 5,000 in the 1980s, and 4,200 in the 1990s.<sup>15</sup>

### *Calculating Family Income and Income Mobility*

Total (pre-tax) family income is the sum of earned and unearned income of all family members (not just primary persons), including wages, salaries, rent, interest, dividends, farm and business income, and transfers, including pensions and social security, welfare, alimony, child support, and help from relatives and others (both in cash and in kind). Some mobility studies have chosen to average income over three years to smooth transitory income shifts.<sup>16</sup> We use single-year income because of the central importance of family composition and labor force status. Factors such as the presence of a spouse, the presence and number of children, and whether a person is employed cannot meaningfully be averaged or sensibly associated with income or earnings if that factor changes during the averaging period.

Family income is expressed relative to a needs standard, or equivalence scale, reported for each family by the PSID. Because there is latitude in the choice of equivalence scales and because the resulting adjusted income is sensitive to the specific standard adopted, some researchers debate whether it is appropriate to adjust income for needs. We follow earlier research in adjusting for needs in order to move toward a measure of economic wellbeing. Using unadjusted income would imply that the economic wellbeing of a five-

<sup>13</sup> We use the term primary person to refer to husband, wife, or single head. This avoids the confusion that could occur because the “head” changes when a woman loses her husband but not when a man loses his wife.

<sup>14</sup> We include children who leave their family of origin (“split-offs”) only after they have been in their own household for at least one year. In the year that they leave, the PSID counts the income of the newly formed family only for the months that they are on their own; thus the income figures are not comparable to full-year income reported for other families.

<sup>15</sup> The increase between the 1970s and the 1980s reflects the increasing number of individuals and families surveyed in the PSID, as children of the original sample families formed new households. The decrease in the 1990s reflects the decision by the PSID to cut the size of their sample in 1997.

<sup>16</sup> Gottschalk and Danziger (1998) compare single-year income and three-year averages and find the patterns of mobility are similar, although the level of measured mobility is, of course, greater when using income from single years because of transitory shifts in any one year.

person family with an income of \$30,000 is equal to that of a two-person family with an income of \$30,000. The needs standard reflects economies of scale; it incorporates estimates of what it costs families of different size and composition to live at a very modest standard.<sup>17</sup> Thus, for example, the PSID needs standard implies that a family of five needs an income of \$50,000 to be approximately as well off as a family of two with a \$30,000 income.

Each family's place in the income-to-needs scale is defined in relative terms; that is, all primary persons are ranked by their family income-to-needs ratio at the beginning of the decade and grouped into quintiles based on that distribution; each quintile contains one-fifth of all weighted families. This sorting determines beginning-of-period quintile cutoffs. In the same manner, the (weighted) distribution of family income-to-needs ratios for all primary persons at the end of the decade is used to calculate end-of-period quintile cutoffs. Mobility is defined as movement across quintiles from the beginning to the end of the decade.

Quintile cutoffs and average family income by quintile are displayed in Table 1. The rise in average living standards can be seen in the increase in the quintile cutoffs over time. In 1969, the income-to-needs ratio at the cutoff for the poorest quintile is 1.6; by 1979 (for families observed during the 1979–89 decade), it rises to 1.9, where it is also in 1988.<sup>18</sup> This trend can also be seen in the rise of inflation-adjusted average family income for all families in the sample from \$54,500 in 1969 to \$70,200 in 1988. Growing income inequality can be observed in the increasing difference between low and high quintile cutoffs over the three decades. For example, this difference (between the 20th and 80th percentiles) in 1988, at 4.0, is larger than the difference in 1979, at 3.2, and larger still than in 1969, at 2.5.<sup>19</sup>

We classify sample members by family type based on their beginning- and end-of-decade family circumstances, such as those who start and end the decade in a married couple, those who have no long-term partner at both the beginning and end of the

Table 1

*Income and Needs by Quintile, All Families*

	1969–79		1979–89		1988–98	
	1969	1979	1979	1989	1988	1998
Income-to-needs ratio at the top of the						
Poorest quintile	1.6	1.9	1.9	2.0	1.9	2.4
Second quintile	2.3	2.8	2.8	3.1	3.0	3.5
Third quintile	3.0	3.8	3.7	4.3	4.1	5.0
Fourth quintile	4.1	5.4	5.1	6.1	5.9	7.3
Average family income						
Poorest quintile	25,815	24,003	23,696	21,595	20,854	23,391
Second quintile	39,994	43,538	43,268	43,925	42,592	48,083
Third quintile	50,984	60,411	57,972	58,600	60,182	67,889
Fourth quintile	63,020	76,322	72,681	80,003	77,231	92,629
Richest quintile	93,233	121,048	117,196	156,453	149,158	191,219
All	54,458	65,384	62,962	72,947	70,247	84,979

Note: Income data are expressed in constant 2000 U.S. dollars (based on the CPI-U-X1). Sample is redrawn each decade; hence column 2 (labeled 1979) reports end-of-decade values for 1969–79 sample, while column 3 (labeled 1979) reports beginning-of-decade values for 1979–89 sample.

Source: Authors' calculations based on data from PSID.

decade, those who start single and who marry during the decade, and—the main focus of this paper—those who begin the period in a married couple and end without a partner.

Finally, we calculate beginning- and end-of-decade measures of average family income and average per-family amounts (separately for men and women) of labor income, employment rates, and hours of work for each family type by beginning- and end-of-decade quintile. Note that for some families, the loss of the spouse occurs early in the decade and for others, near the end of the decade. This means that the beginning-of-decade measures of income, hours, and so forth are not, in many cases, the values for husband and wife immediately before the disso-

<sup>17</sup> The PSID family-needs measure is based on an annual food-needs standard and adjusted for economies of scale (similar to "Orshansky-type" poverty measures). The PSID standard takes into account family size and the age and sex of family members. It is about 25 percent higher than the federal poverty line because it is based on the low-cost budget, rather than the more stringent economy budget used in determining the poverty threshold.

<sup>18</sup> Because the people we track are 10 years older at the end of the decade, life-cycle effects would cause income-to-needs ratios to improve during each decade, on average, as seen in Table 1. Note that this means it is inappropriate to compare a beginning-of-period income-needs cutoff with an end-of-period cutoff to evaluate economy-wide increases in wellbeing. The same holds true when comparing family incomes.

<sup>19</sup> For discussion on growing income inequality and its relationship to changes in income mobility, see Bradbury and Katz (2002).

Table 2

*Characteristics of Families That Begin the Decade as Couples*

	1969–79	1979–89	1988–98
Percentage of all families			
Families losing husband	5.7	5.2	4.5
Families losing wife	2.3	3.0	2.5
Stay-couple families	81.5	73.3	69.0
Percent with both in couple aged 45 or more at beginning of decade			
Families losing husband	30.7	27.5	22.5
Families losing wife	18.0	15.6	9.2
Stay-couple families	24.2	28.3	22.7
Percent widowed at end of decade			
Families losing husband	43.6	32.6	27.6
Families losing wife	19.3	16.2	9.7
Stay-couple families	0.0	0.0	0.0
Percent with children at beginning of decade			
Families losing husband	69.5	70.9	63.0
Families losing wife	75.6	76.6	71.1
Stay-couple families	77.1	69.8	64.2
Percent with children at end of decade			
Families losing husband	49.9	49.9	40.1
Families losing wife	26.3	16.8	14.1
Stay-couple families	55.5	48.0	45.1
Average family size at beginning of decade			
Families losing husband	4.2	3.6	3.6
Families losing wife	4.5	3.7	3.5
Stay-couple families	4.2	3.7	3.5
Average family income at beginning of decade (in 2000 \$)			
Families losing husband	52,483	63,804	59,591
Families losing wife	54,646	57,658	59,117
Stay-couple families	57,764	70,906	83,381
Average income-to-needs ratio at beginning of decade			
Families losing husband	2.8	3.7	3.5
Families losing wife	2.9	3.2	3.6
Stay-couple families	3.1	4.0	4.9
Percent in which wife is educated beyond high school <sup>a</sup>			
Families losing husband	16.7	28.3	36.8
Families losing wife	16.6	31.1	41.8
Stay-couple families	19.7	30.8	49.8
Percent in which husband is educated beyond high school <sup>a</sup>			
Families losing husband	20.2	32.0	37.1
Families losing wife	34.7	41.9	39.9
Stay-couple families	30.8	42.5	56.7

<sup>a</sup>Educational attainment is measured as of the beginning of the decade; for some sample members, the education question may have been asked several years before the beginning of the decade. Source: Authors' calculations based on data from PSID.

families, either spouse may remarry by the end of the decade; these families' income changes are not included in the measures for families losing a spouse because they are categorized as "stay-couple" families. Thus, the average decade changes we observe may underestimate both the immediate loss in family income and the long-run earnings response of the remaining spouse. Since marital dissolutions are spread over the decade, the income, work effort, and mobility data provide an indication of the average changes five years after a marriage dissolves for families in which the widowed, separated, or divorced head has not remarried in that time span.

*Characteristics of Families That Lose a Spouse*

During each of the three decades, families that lose a spouse constitute 7 percent to 8 percent of all (weighted) families in the sample. (See Table 2 for these and other descriptive data discussed below.)

*Age and source of marital dissolution.*<sup>20</sup> Men die younger than women, on average, and tend to be older than their wives. As a result, death accounts for a higher fraction of the dissolutions for women than for men, and women who lose husbands are older, on average, than men who lose wives. Specifically, women who have lost their husbands (and not remarried during the decade) are about twice as likely

to be widows as men who have lost their wives are to

<sup>20</sup> Because the analysis focuses on labor market involvement—which changes with age—we investigated whether mobility patterns are markedly different when older families are excluded. They are not. Mobility patterns for younger families (at least one primary member is under age 45 at the beginning of the decade) are similar across family types and across decades to those reported for the full sample.

lution. And, similarly, the average decade income change we report is not an exact measure of either the immediate drop in income from the absent spouse or the long-run work response of the remaining spouse, but some of each depending on when the dissolution occurs. Moreover, for earlier-dissolving

be widowers. In addition, the widow/widower fractions decrease markedly over the three decades; widows constitute 44 percent of women who lost husbands in the 1970s and only 28 percent in the 1990s. Furthermore, because women are more likely to be widowed and men are more likely to remarry, and remarry sooner, after any dissolution, families losing a husband constitute about two-thirds of all families losing a spouse.

*Presence of children.* At the beginning of each decade, families that will lose a spouse are about as likely to contain children under the age of 18 as families where the couple stays married. By the end of the decade, because women are more likely than men to have custody of the children after a marriage dissolves, children are substantially underrepresented in the male-headed families resulting from marital dissolution.<sup>21</sup> Moreover, the youngest child in noncouple families headed by women is younger, on average, than the youngest child in noncouple families headed by men. Because caring for children influences the extent of labor market involvement, we compare the labor market involvement and work response of families with and without children in Appendix B.

*Family income level.* Families who will lose one partner have lower average family incomes (and lower ratios of income to needs) at the beginning of all three decades than families that will stay married. This deficit is especially pronounced at the beginning of the 1990s, when the average incomes of families whose marriages will dissolve are only 70 percent of those of families that will stay married, down from about 90

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*Marital dissolution  
(without remarriage) is concentrated  
among low-income families in all  
three decades, and this difference  
is larger in the 1990s.*

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percent in 1969.<sup>22</sup> Put another way, marital dissolution (without remarriage) is concentrated among low-income families in all three decades, and this difference is larger in the 1990s. While 9 percent to 10 percent of all married-couple families end the decade

with a single head in all three decades, 12 percent to 13 percent of the poorest married-couple families (those who begin the decade in the lowest quintile) in 1970s and 1980s end without a spouse; in the 1988–98 sample, the figure is 18 percent.

*Educational attainment.* Primary men are more educated than primary women, on average, and both show increasing educational attainment across the decades.<sup>23</sup> Women whose marriages end during the decade have below-average educational attainment; they are more likely to be high school dropouts and less likely to be college grads than other married women. Some of this difference is probably a cohort effect—older women generally have less education than younger women and, as noted above, women who begin the decade as part of a couple and end as a single head are older than average. Educational attainment of men who lose their wives differs less from other married men, except in the 1990s.

In the 1990s, the educational shortfall for both women and men losing a spouse is greater than in the earlier decades. It is especially large for women: Twenty-five percent of stay-couple women have a college degree (or more) in 1988, compared with only 14 percent of women who lose their husbands during the decade. This larger shortfall in educational attainment is undoubtedly one reason for the substantially lower average family incomes noted above for families losing a spouse during the 1990s.

### ***III. Income Mobility Patterns for Families that Lose a Spouse***

Family income mobility across quintiles is summarized in a five-by-five matrix in which cell location indicates the beginning- and end-of-period income-to-needs quintile. Table 3 shows such matrices for two types of families losing a spouse in the 1970s, 1980s, and 1990s.<sup>24</sup> (See Appendix Table A1 for mobility matrices for all families.) Because they are based on

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<sup>21</sup> The PSID makes no provision for joint custody. The survey asks the parent being tracked to identify who lives in the family with them. If the parent includes a child or children from the dissolved marriage, the PSID counts those children as being part of that family.

<sup>22</sup> The income patterns across different family types are virtually the same in terms of income-to-needs ratios. That is, the wellbeing of couples whose marriages will dissolve are below the stay-couple averages to a much greater degree in 1988 than in 1969 and 1979.

<sup>23</sup> The PSID does not collect data on educational attainment every year. Thus, we use data for the most recent year in which the individual reported on education attainment as of the beginning of each decade.

Table 3

*Mobility Patterns for Families that Lose a Spouse*

(Quintile percentages sum to 100 across each row)

	Quintile in 1979					Mix in 1969
	Poorest	Second	Third	Fourth	Richest	
<b>Quintile in 1969</b>						
Families Losing Husband						
Poorest	75.0	15.8	8.0	1.2	0.0	26.4
Second	68.0	25.0	0.0	3.1	4.0	19.9
Third	25.0	28.6	26.8	15.7	3.8	17.2
Fourth	30.1	31.2	12.3	22.8	3.6	17.4
Richest	18.6	32.6	14.9	23.8	10.1	19.1
Mix in 1979	46.4	25.7	11.7	12.1	4.0	100.0
Families Losing Wife						
Poorest	57.7	19.0	20.6	1.1	1.5	22.4
Second	13.3	17.2	40.7	10.8	17.9	17.9
Third	27.7	8.5	22.9	32.8	8.1	20.0
Fourth	8.5	7.1	24.9	19.0	40.5	20.0
Richest	0.0	0.0	0.0	34.3	65.7	19.6
Mix in 1979	22.6	10.5	21.5	19.3	26.2	100.0
	Quintile in 1989					Mix in 1979
	Poorest	Second	Third	Fourth	Richest	
<b>Quintile in 1979</b>						
Families Losing Husband						
Poorest	76.0	15.9	0.0	8.1	0.0	18.0
Second	42.1	30.9	13.8	13.3	0.0	24.9
Third	31.6	21.0	29.1	18.3	0.0	19.3
Fourth	27.7	22.8	17.9	10.9	20.6	22.4
Richest	13.7	15.9	22.7	31.6	16.1	15.5
Mix in 1989	38.6	22.1	16.6	15.6	7.1	100.0
Families Losing Wife						
Poorest	60.1	6.5	19.3	14.1	0.0	17.6
Second	15.9	35.3	10.3	19.5	19.0	22.8
Third	17.1	12.0	25.5	28.9	16.5	27.2
Fourth	5.1	19.5	35.3	31.8	8.4	23.4
Richest	0.0	25.9	0.0	19.1	55.0	8.9
Mix in 1989	20.1	19.3	21.0	23.9	15.7	100.0
	Quintile in 1998					Mix in 1988
	Poorest	Second	Third	Fourth	Richest	
<b>Quintile in 1988</b>						
Families Losing Husband						
Poorest	80.2	16.1	3.7	0.0	0.0	27.8
Second	64.5	23.4	4.2	7.8	0.0	24.5
Third	21.3	63.8	10.5	4.5	0.0	19.5
Fourth	9.6	9.1	49.9	18.7	12.7	11.0
Richest	29.2	22.2	24.5	10.6	13.5	17.2
Mix in 1998	48.3	27.5	13.8	6.7	3.7	100.0
Families Losing Wife						
Poorest	58.1	19.8	10.2	11.9	0.0	26.3
Second	38.7	29.2	20.1	7.0	5.0	30.7
Third	15.1	16.2	26.6	35.3	6.8	18.1
Fourth	14.6	58.5	7.9	19.1	0.0	12.3
Richest	0.0	0.0	43.4	27.1	29.5	12.6
Mix in 1998	31.7	24.3	20.1	17.4	6.5	100.0

Source: Authors' calculations based on data from PSID.

quintiles, these transition matrices represent a relative measure of mobility, indicating how the wellbeing of individual families changes relative to other families.<sup>25</sup>

While researchers analyzing income mobility commonly use transition matrices such as these, several factors should be kept in mind when interpreting them. First, some movements across quintiles are the result of life-cycle changes, which may not be what people typically mean when they use the term "mobility." Second, some movements across quintiles may result from small

<sup>24</sup> Note that in married couples who were members of the original PSID sample, the wife would be in the "families losing husband" and the husband in "families losing wife" matrix, each with appropriate weights. Their beginning-of-decade quintile would be the same (family income and needs were the same), but the end-of-decade quintile would depend on the income-to-needs ratios in each of the two separate families. That is, the entry representing each partner's family would be in the same row of the matrices, but possibly a different column. For other couples, the PSID follows only the original sample member (or member born into a sample family), so only one of the partners would be observed after dissolution, and the dissolving family would appear in either the "families losing husband" or the "families losing wife" matrix, but not both.

<sup>25</sup> Relative income mobility is analytically distinct from an overall rise or fall in real incomes that leaves relative income positions the same, and from an increase or decrease in income inequality that pushes quintile cutoffs apart or together but leaves individuals in the same relative position (rank order) as before. Mobility across quintiles is also distinct from absolute measures of mobility, such as movements into and out of poverty, defined in terms of purchasing power or income-needs cutoffs that do not change over time. Note that while a relative measure of mobility implies that upward and downward mobility balance out for all families, subsets of families (such as families losing a spouse) make net gains or lose ground relative to the quintile cutoffs for all families in the sample.

changes in income-to-needs ratios, for example when a family just above a quintile cutoff experiences a small decline in income. At the same time, relatively large changes in income-to-needs ratios may not result in any mobility across quintiles, such as when a family starts at the bottom of one quintile but doesn't gain enough to move up into the next highest quintile. Third, the range of the income-to-needs ratio from the upper cutoff of a quintile to its lower cutoff varies across quintiles and across time. The upper quintile, in particular, spans a wide range, and a family's wellbeing may decline considerably relative to other rich families without falling out of it. Similarly, because of growing inequality, moving up or down a quintile is a higher hurdle in the 1990s than in earlier decades. Fourth, downward mobility cannot occur from the poorest quintile no matter how low a family's income-to-needs ratio falls relative to other poor families, and families cannot move up from the richest quintile, no matter how high their income-to-needs ratio rises.

The matrices in Table 3 indicate that overall mobility outcomes differ strikingly, depending on whether the family loses a husband or a wife. Consistent with the literature discussed in Section I above, families losing a husband experience greater downward mobility than families losing a wife in all three decades. In fact, they experience considerably more downward mobility than any other family type. In all three decades, well over half of all families losing a husband that have room to move down a quintile or more (that is, those that start above the poorest quintile) do move down, while fewer than one-quarter of those who can move up do so (Figure 3).<sup>26</sup> Of those that start in the top three quintiles, about one-half move down into the poorest two, while only about one-tenth of those beginning in the lowest three quintiles move up into the richest two.

In absolute terms, families losing a husband see family income drop by an average of 40 percent to 45 percent in real terms.<sup>27</sup> (Income changes by family type are reported in Appendix Table A2.) These families also experience a drop of 15 percent to 20 percent in the ratio of income to needs.

Among the poorest of these families—those who, as a couple, are in the bottom quintile at the beginning of the decade—at least three-quarters are still there 10 years later (upper-left cell of the matrices in Table 3) and less than 10 percent move beyond quintile two. Not only are these families

stuck in the poorest quintile, but their wellbeing also deteriorates during the 1970s and 1980s and fails to improve in the 1990s. The average family income-to-needs ratio of families losing a husband that start and end the decade in the lowest quintile falls from 1.09 to 1.00 during the 1970s and from 1.25 to 1.03 during the 1980s; the ratio held steady in the 1990s. Even among the richest families losing husbands, downward mobility is typical. Less than one-sixth of those in the top quintile at the beginning of the decade are still in the top quintile by decades' end.

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*Of the families that lose  
a husband, less than one-sixth  
of those in the top quintile  
at the beginning of the decade  
are still in the top quintile  
by decades' end.*

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Families losing a wife fare better. Their family incomes fall during all three decades, but the resulting male-headed families are less likely to contain children than their female-headed counterparts, so needs fall more than income when the marriage ends. Furthermore, as noted in Section I and documented below, men's earnings are higher than women's, on average. As a result, families that lose a wife end each decade with higher ratios of income to needs, on aver-

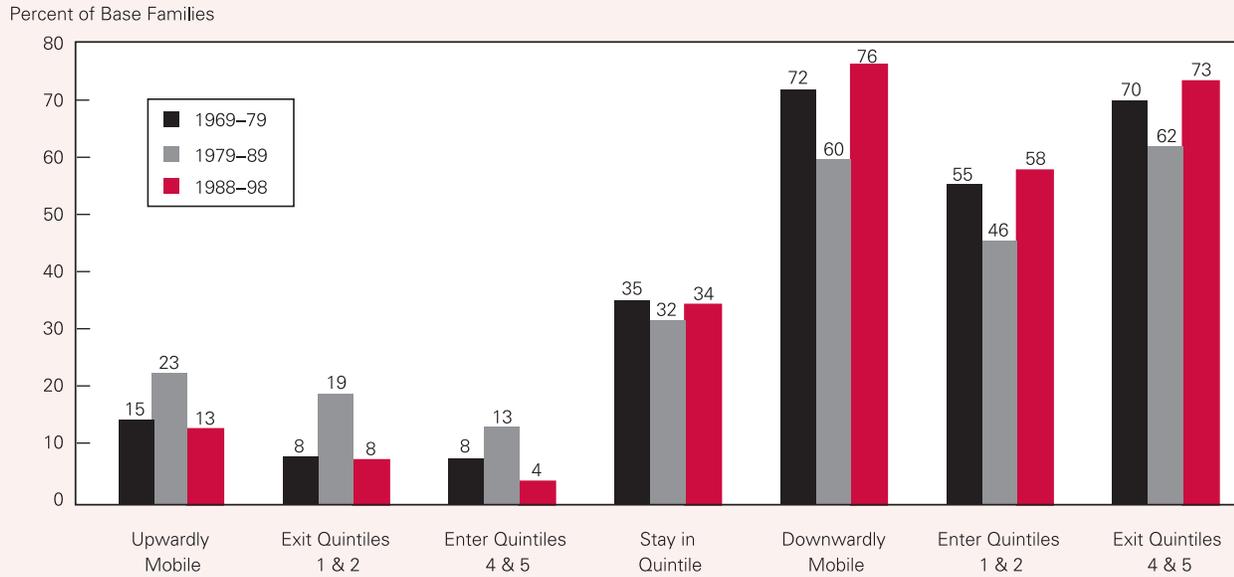
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<sup>26</sup> We express the mobility fractions relative to the base of families for which each direction of movement is possible. Thus, since families in the fifth (richest) quintile cannot move up, the upwardly mobile share is the fraction of families that begin the decade in the lowest four quintiles that end the decade in a higher quintile. Similarly, the downwardly mobile share is the fraction of families that begin the decade in the top four quintiles that move down a quintile or more by the end of the decade.

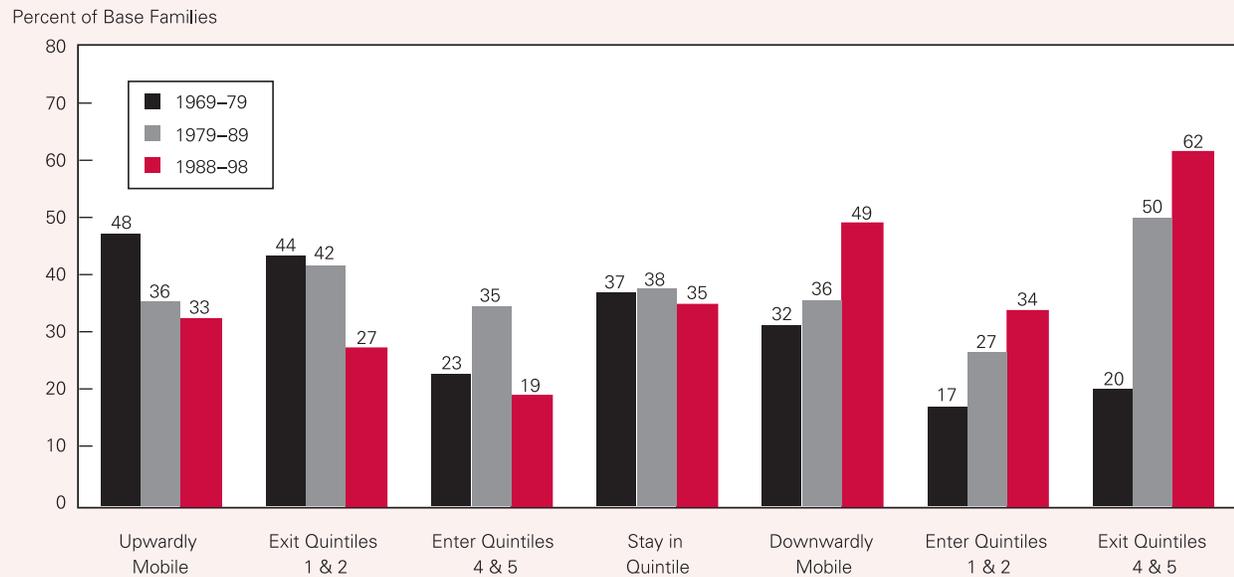
<sup>27</sup> This decline occurs even though the PSID's family (pre-tax) income measure is quite inclusive. The interview asks specifically about alimony, child support, help from relatives, and "anything else." The interview also asks, "Did anyone (else) not living here now help you or your family out financially—I mean give you any money, or help with your expenses during [last year]?" This provides a measure of in-kind transfers from relatives and friends, such as a grandparent or ex-spouse paying for camp, music lessons, or medical and dental expenses.

Figure 3

### Mobility Patterns for Families Losing Husband



### Mobility Patterns for Families Losing Wife



Note: "Base" families for each mobility direction are those who begin in a quintile from which it is possible to move in the calculated direction. For example, since families in the poorest quintile cannot move down, the "downwardly mobile" bar reports the fraction of families that begin the decade in quintiles 2 through 5 that end the decade in a lower quintile than where they began. Similarly, the "enter quintiles 4 and 5" bar indicates the fraction of families beginning the decade in quintiles 1 through 3 that end the decade in quintile 4 or 5.

Source: Authors' calculations based on data from PSID.

age, than they began.<sup>28</sup> These two factors (earnings and children) reinforce each other to yield the contrasting mobility patterns for men and women who lose their spouse.

Looking at trends over the decades, patterns are mixed. Our expectation that mobility outcomes for families losing a husband would improve from decade to decade as women's labor market involvement rises is only partially supported, while the hypothesis of deteriorating outcomes regarding families losing a wife is confirmed. For families losing a husband, downward mobility is less pronounced in the 1980s than in the 1970s, as expected, but becomes more pronounced in the 1990s. Thus, 72 percent of these families that begin above the poorest quintile move down a quintile or more in the 1970s, 60 percent in the 1980s, and 76 percent in the 1990s. Fifteen percent of these families beginning below the richest quintile move up a quintile or more in the 1970s, 23 percent in the 1980s, and 13 percent in the 1990s.<sup>29</sup>

As expected, mobility patterns for families losing a wife become less advantageous in each decade compared with the one before (bottom panel of Figure 3). These families are less upwardly mobile in the 1990s (33 percent of those not already in the top quintile move up) than in the 1980s (36 percent) or the 1970s (48 percent). In addition, downward mobility of these families increases in each successive period. As a result, by the 1990s, fully one-third of families losing a wife who begin in the top three quintiles move down into the poorest two, while that figure is only one-sixth in the 1970s. Furthermore, the average family income of families losing a wife falls by a considerably greater percentage (33 percent) during the 1990s than during the 1980s (11 percent) or 1970s (3 percent), and the average income-to-needs ratios rise by less in each successive decade.

We now turn to the link between women's increasing labor market involvement and the mobility patterns just discussed. Several factors directly (arithmetically) influence the eventual mobility outcome when a family loses a spouse: the drop in income represented by the share of the husband's (wife's) earnings in beginning-of-decade family income; the change in needs—family size and composition—associated with the dissolution; the extent to which the now-single primary person increases his or her labor income during the decade; and changes in the amount of other income after dissolution, such as contributions by other family members and government transfers.

This list of factors suggests two key indicators of women's labor market involvement that should be

positively associated with better mobility outcomes for families losing a husband: the share of family income accounted for by wives' earnings at the start of the decade, and the extent to which wives increase their earnings during the decade. In addition, the first should be negatively associated with the mobility prospects of families losing wives.

The relationship between family income mobility and these key factors in women's labor market involvement are explored below. In Section IV, we look at mobility patterns of families classified by women's employment status—working or not—at the beginning of the decade before the dissolution occurs. In addition, we document average fractions of family income contributed by wives' and husbands' labor earnings by family mobility outcome—upwardly mobile, stay-in-quintile, and downwardly mobile. In Section V, we measure the size of the woman's work response that occurs in families after losing a husband, consisting of changes in the fraction employed, work hours, and earnings per hour. We also examine these changes—and changes in family income for families losing wives—by mobility outcome.

#### ***IV. Women's Labor Market Involvement and Mobility Before Marital Dissolution***

A first test of the role of women's labor market involvement in family income mobility is to ascertain whether families in which the woman has greater labor market involvement at the beginning of the decade fare better when they lose a husband than families in which the woman is less involved. To do so, we first look at family mobility outcomes separately for families in which the wife is working at the start of the decade and families in which she is not. Then we examine wives' and husbands' earnings shares of family income at the beginning of the decade.

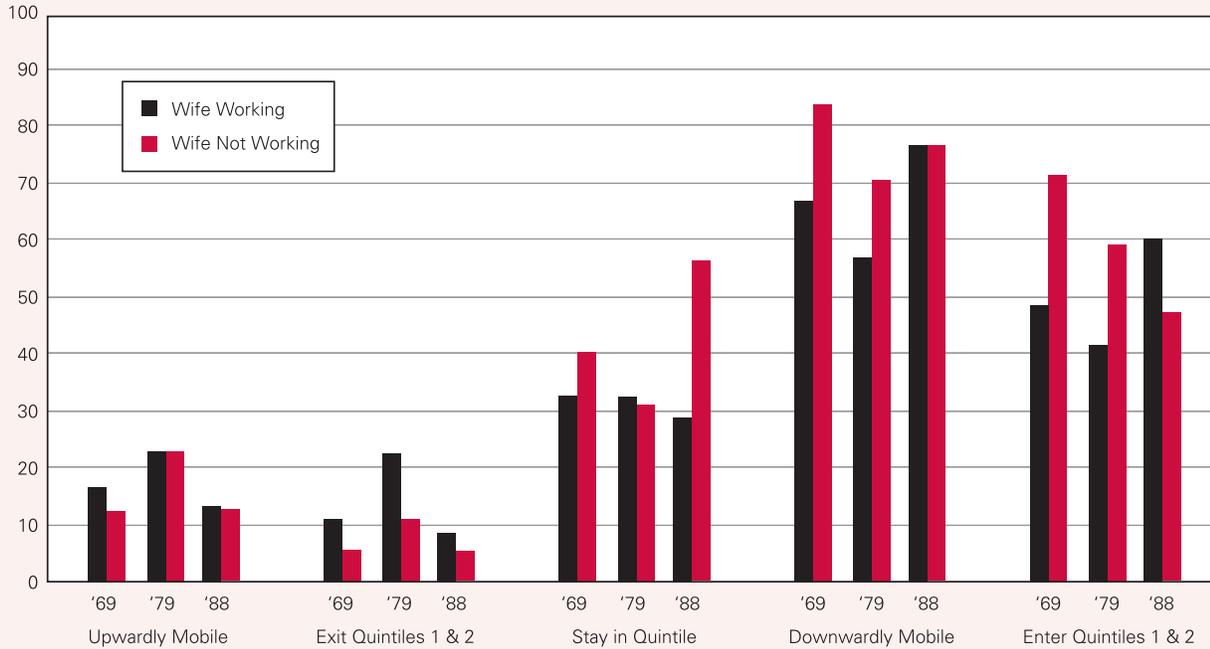
<sup>28</sup> Alimony and child support are not subtracted from the income of the sending family (as other expenses are not subtracted). To the degree that ex-husbands and fathers are making such payments, or are directly paying for specific expenses incurred by children or former wives at the end of the decade, their incomes, income-to-needs ratios, and upward mobility are overstated and their downward mobility is understated. Duncan and Hoffman (1985) adjust the incomes of fathers for payment of alimony and child support and find that their income-to-needs ratios still rise after divorce or separation, but by less than is implied by the unadjusted income data.

<sup>29</sup> For bigger moves, however, downward mobility lessens from each decade to the next: In the 1970s, 51 percent of those that start above quintile two move down two or more quintiles, with the corresponding figures for the 1980s and 1990s at 45 percent and 40 percent, respectively.

Figure 4

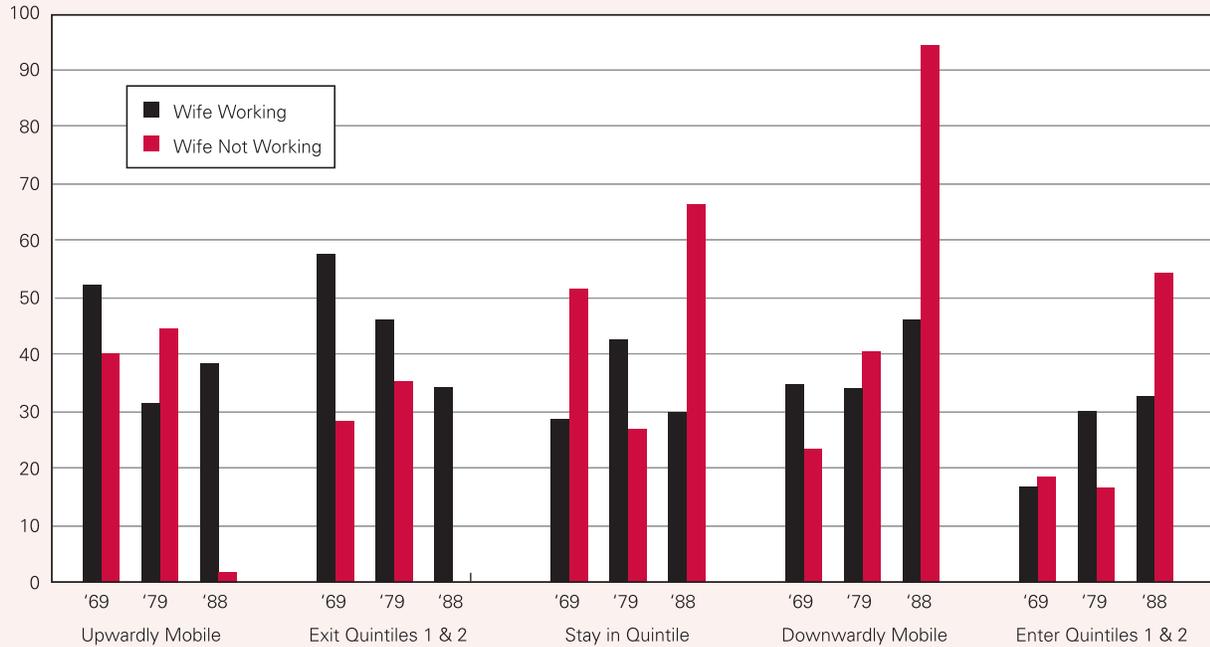
*Mobility During Decade of Families Losing Husband  
by Work Status of Wife at Beginning of Decade*

Percent of Base Families



*Mobility During Decade of Families Losing Wife  
by Work Status of Wife at Beginning of Decade*

Percent of Base Families



Note: See note to Figure 3 regarding base families. Dates mark start of decades, 1969-79, 1979-89, and 1988-98.  
Source: Authors' calculations based on data from PSID.

Because the income consequences of unemployment are similar to those of being out of the labor force, we focus on employment rates—whether individuals are working—rather than on whether individuals are in the labor force (which also includes those who are unemployed). We define working as earning at least \$1 in labor income during the year.<sup>30</sup>

The top panel of Figure 4 displays mobility patterns for families losing a husband over the three decades by the wife's employment status at the beginning of the decade.<sup>31</sup> The figure shows that mobility outcomes during the decade are better for families with an employed woman at the beginning of the decade—these families move up more frequently and down less frequently—than for those in which the wife is not initially employed.<sup>32</sup> For example, of fami-

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*Mobility outcomes during the decade are better for families with an employed woman at the beginning of the decade—these families move up more frequently and down less frequently—than for those in which the wife is not initially employed.*

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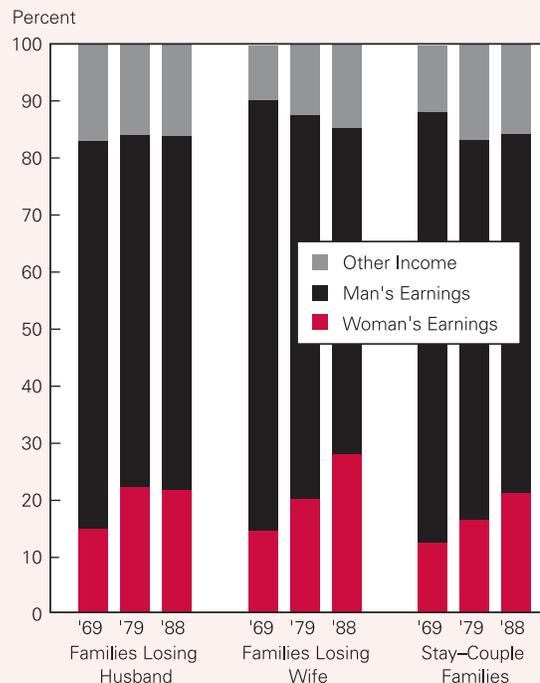
lies that begin the 1970s in the bottom two quintiles and lose a husband, 5 percent of those in which the wife is not working at the beginning of the decade move up, while 11 percent of those with a working wife move up. Of those that begin in higher quintiles in 1969, 71 percent with a nonworking wife move down into one of the poorest two quintiles, while only 48 percent of those with a working wife do.

These contrasting mobility patterns suggest that a wife's employment can be viewed as partial insurance against the most serious drops in family income occurring when her husband departs—upward mobility is higher for families with employed women. But the insurance is far from complete: More than a majority of families in which the woman is working still move down a quintile or more when the husband is lost.

The lower panel of Figure 4 shifts the focus to families losing wives, reporting mobility outcomes by the wife's beginning-of-decade employment status. Here the picture is mostly *not* as expected. One would

Figure 5

*Composition of Family Income at Beginning of Decade by Family Type*



Source: Authors' calculations based on data from PSID.

expect the loss of a working wife to cause less-favorable mobility outcomes than the loss of a nonworking wife, since a working wife should be associated with a bigger income drop. However, with only a few exceptions, the figure shows that families losing working wives experience more-favorable mobility outcomes.

A second measure of labor market involvement at the beginning of the decade is the importance of the wife's labor income to her family. Figure 5 reports the shares of married-couple family income accounted for

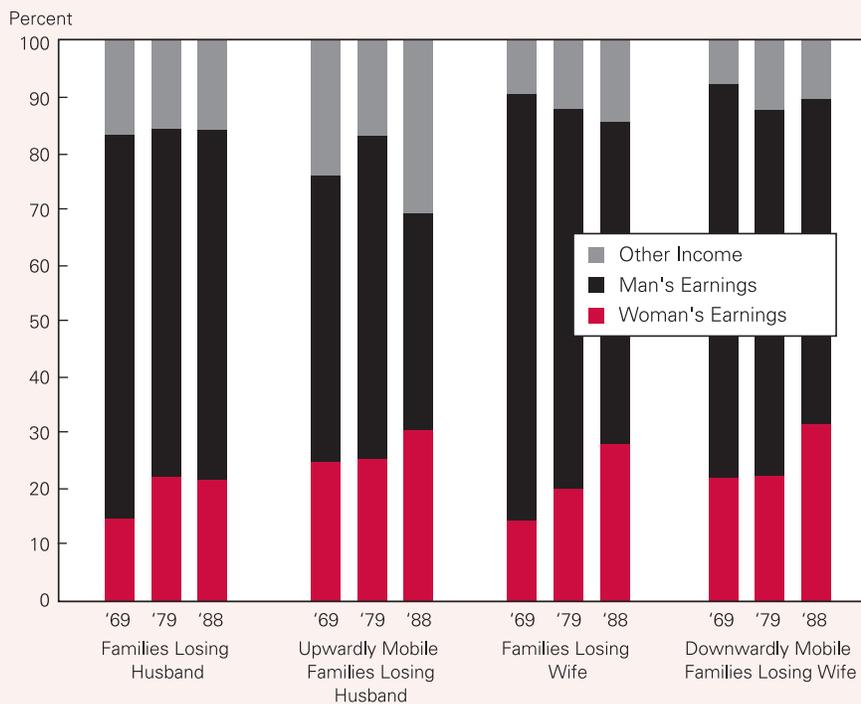
<sup>30</sup> Very few observations with very low annual earnings exist. Raising the threshold somewhat (to \$50 or \$100) would not noticeably alter the number of people classified as "working." Furthermore, most of those classified as working also have nonzero hours of work and vice versa.

<sup>31</sup> The wife is employed in 62 percent of these families in 1969; the employed fraction rises to 78 percent in 1988. See Appendix Table A3 for these data on employment rates by family type.

<sup>32</sup> The only exception is in the 1990s, when families suffer the same downward mobility regardless of the employment status of the wife at the decade's start. This seems to be accounted for, in part, by differences in downward mobility across higher-income families; among those who begin the decade in quintiles three to five, those with an employed wife are more likely to move down into one of the poorest two quintiles than those without an employed wife.

Figure 6

*Composition of Family Income at Beginning of Decade by Family Type and Subsequent Mobility Direction*



Source: Authors' calculations based on data from PSID.

by wives' and husbands' labor income at the beginning of each of the three decades. The PSID defines labor income (or earnings) as wages and salaries plus the labor part of farm and business income.<sup>33</sup>

On average, women's earnings make up a larger fraction of family income in later decades than earlier. More specifically, for all married-couple families, women's earnings share rises from under 15 percent in 1969 to over 20 percent by 1988. Families losing a husband are a partial exception, however, as women's start-of-period share rises from 14.7 percent in 1969 to 22.0 percent in 1979, and then remains more or less steady at 21.6 percent in 1988.

The decade-to-decade increase in women's share of family income has direct implications for families losing a wife. As noted earlier, mobility outcomes for these families deteriorate from one decade to the next. Figure 5 suggests an explanation: The loss of a wife in later decades implies a bigger income loss for the family—wives' earnings account for more of family

income than in earlier decades. Figure 6 confirms this interpretation: Downwardly mobile families losing a wife have higher wives' earnings shares than other families losing a wife. How can we square this with the apparently contradictory patterns in the lower panel of Figure 4? Perhaps not surprisingly, we find that the amount of labor earnings, not simply having nonzero earnings (our definition of "working"), determines the size of the income loss and hence the associated mobility outcomes.

As women's share of family income increases in successive decades, men's share decreases (Figure 5). For married-couple families, men's earnings share falls from about 75 percent in 1969 to about 60 percent in 1988.

*Although the loss becomes smaller over time, the earnings that families lose when a husband departs are substantial—well over half of family income, on average.*

Although the loss becomes smaller over time, the earnings that families lose when a husband departs are substantial—well over half of family income, on average.

Furthermore, for families losing a husband, Figure 6 confirms the hypothesized relation with mobility: Those families that still manage to move up a quintile or more lose less, on average, than those

<sup>33</sup> The PSID includes the nonlabor part of business and farm income with rent, dividends, interest, and other asset income.

that hold their position in the family income distribution or than those that move down. That is, they have a lower husband's earnings share and a higher wife's earnings share at the beginning of the decade. Specifically, wives' earnings make up a greater fraction (25 percent to 30 percent) of family income at the beginning of the decade for families that move up one or more quintiles than for families that stay in their beginning quintile, and a greater fraction for families that stay than for those that are downwardly mobile. Similarly, husbands' earnings make up a smaller share of family income for these upwardly mobile families and, therefore, represent a smaller loss to the family's wellbeing.

### ***V. Changes in Family Income and Its Components***

A second broad test of the role of women's labor market involvement in the mobility of families losing a husband involves looking at the decade increase in women's earnings and its components. The magnitude of women's work response to the loss of their husbands' incomes, as measured by increased earn-

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*For families losing a husband, women's earnings rise by almost 90 percent, on average, over the 1970s, and between 50 percent and 60 percent in each of the subsequent decades—twice as fast in all three decades as for any other family type.*

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ings, is substantial. For families losing a husband, women's earnings rise by almost 90 percent, on average, over the 1970s and between 50 percent and 60 percent in each of the subsequent decades—twice as fast in all three decades as for any other family type. By contrast, for families losing a wife, men's labor income does not rise in real terms during any of the three decades.<sup>34</sup>

To investigate the nature of these work responses and their relationship to mobility outcomes, we compare the work responses of women who lose their husbands—and the components of those responses—with those of women who stay married. Then we examine work responses by mobility direction for families losing husbands and document contributions to total family income for both families losing husbands and families losing wives.

### ***Components of Women's Increased Earnings for Families Losing a Husband***

The sizable increases in women's earnings for families that lose a husband reflect several changes in labor market involvement: Some women who are not working at the beginning of the decade (while married) begin paid work; the average work hours for those in the workforce rise; and the average earnings per work hour increase. The latter two changes can reflect changes in behavior for those who are already working or differences in the average behavior of those who begin working, those who keep working, and those who stop working during the decade. Average work hours will rise both when women who are working initially add hours and when new entrants work for more hours, on average, than those who are already working. Similarly, average labor income per hour rises if women who are already working bring in higher pay or if new entrants or added hours are paid at a higher rate.

Since the increase in women's labor income is literally a product of increases in employment rates, hours of work, and earnings per hour, we can quantify the extent to which increases in post-dissolution earnings are accounted for by each of these three factors.<sup>35</sup> As a group, women in families that lose a husband respond in all three ways to generate growth in their annual labor earnings (see Figure 7).

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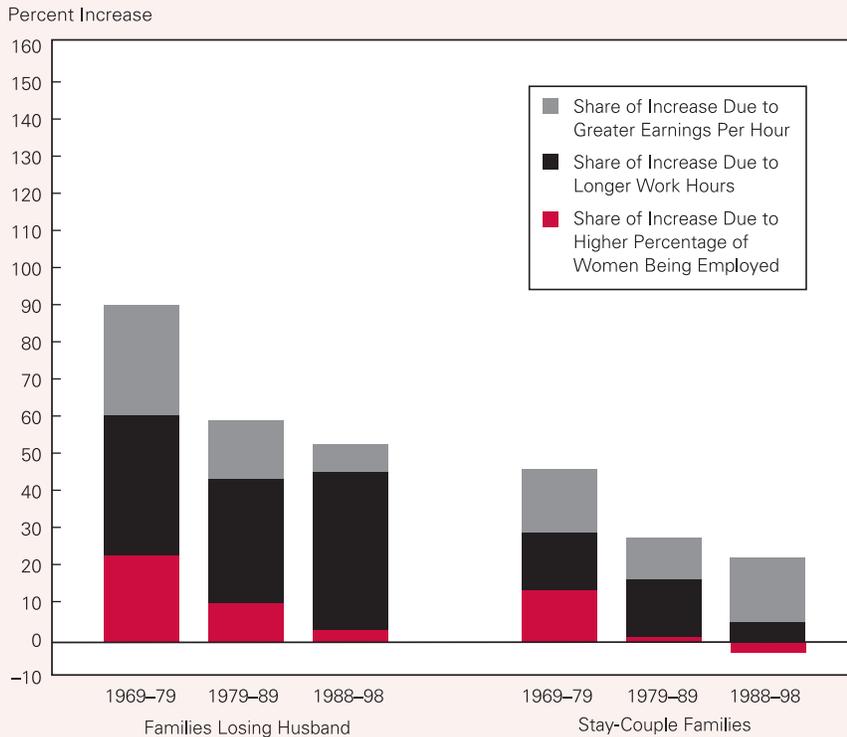
<sup>34</sup> Earnings for men who lose wives hold steady from 1969 to 1979, decline 12 percent from 1979 to 1989, and decline 16 percent from 1988 to 1998. See Appendix Table A2.

<sup>35</sup> Shares of the total increase can be decomposed as follows: For any family type or mobility category, the average woman's annual labor income per family is equal to the product of the employment rate (number of families with a working woman divided by number of families), hours per working woman, and labor income per work hour. For changes in woman's labor income during a decade, the ratio of end-of-decade woman's labor income per family to beginning-of-decade woman's labor income is the ratio of the products of the three factors at the end to the product at the beginning, or the product of the ratios. Taking logs makes the relationship additive; increases in each factor can be divided by the increase in woman's labor income per family to obtain an estimate of that factor's contribution to the total.

Figure 7

*Decade Increase in Women's Annual Labor Income Per Family,  
With Components of Increase*

Families Losing Husband and Stay-Couple Families



Source: Authors' calculations based on data from PSID.

With one exception, their increases are larger than those of women who stay married during each decade.<sup>36</sup>

*Employment rates.* At the beginning of each decade, women who lose their husbands have higher employment rates than women who remain married.<sup>37</sup> By the end of the decade, women who lose their husbands are even more likely to be working—their employment rate rises from 62 percent to 73 percent in the 1970s, from 74 percent to 80 percent in the 1980s, and from 78 percent to 81 percent in the 1990s (See Appendix Table A3). Moreover, these increases are greater than for any other family type. For example, although the employment rate increase is only 3 percentage points in the 1990s, the rate for women who stay married actually falls.<sup>38</sup>

Note that increases in employment rates for women who lose their husbands reflect the net effect of families in which the woman begins working

during the decade, partially offset by families in which the woman stops working. Women begin working in 21 percent of families losing husbands in the 1970s, in 16 percent of those families in the 1980s, and in 12 percent of them in the 1990s. Women stop working in about 10 percent of families losing husbands in all three decades. The shrinking fraction of women who begin working when their husbands die or divorce reflects, in large part, the larger fraction who are already working while still married (at the beginning of the decade). In fact, in each decade, over half of the women losing husbands who are not working at the beginning of the decade begin working during the decade. The relative constancy of the stop-working fraction probably reflects retirements.

*Annual work hours.* Working women who will lose their husbands average 1,260 annual work hours in 1969, rising to over 1,500 hours in

1979 and 1988 (See Appendix Table A4). As is the case with employment rates, they exhibit a much greater increase in work hours than other women during all three decades.<sup>39</sup> Average annual hours per woman

<sup>36</sup> In the 1990s, the increase in labor income per hour is larger for women who stay married.

<sup>37</sup> By contrast, men's employment rates are lower in families that lose a husband than in other family types. Since a sizable fraction of these men will die during the decade, their employment rates may be lower because they are older and retired, or because they are less healthy than average. In addition, their lower employment rates may make them more prone to divorce or separation. However, the latter seems a less likely explanation, since it should also apply to the men who lose their wives through divorce or separation. But men who lose their wives have only slightly lower beginning-of-decade employment rates than men who stay married.

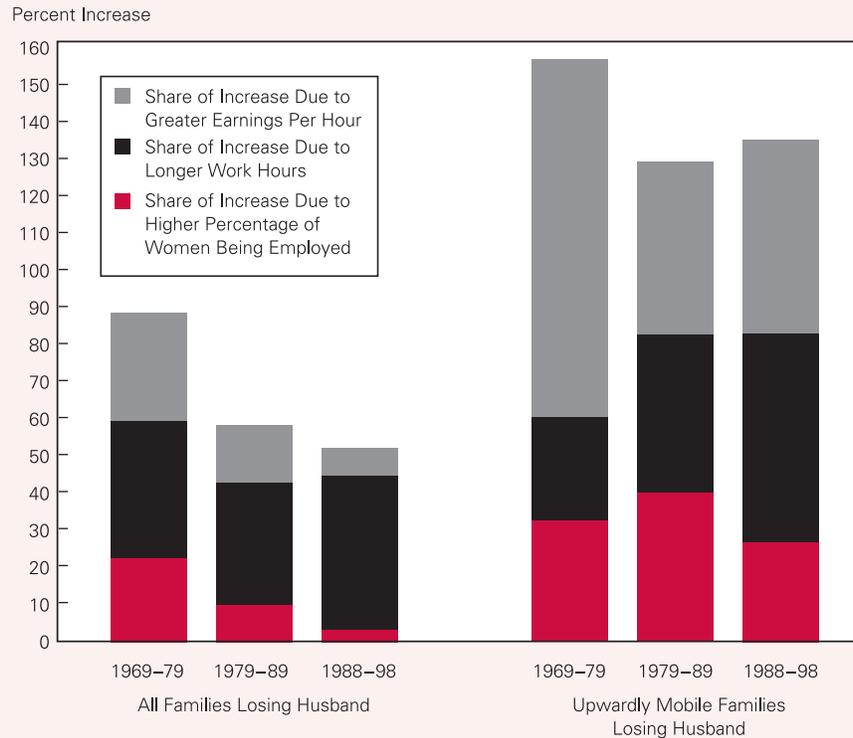
<sup>38</sup> The employment rate of all women aged 16 and over rose almost 7 percentage points in the 1970s and in the 1980s, but less than 4 percentage points in the 1990s, according to the U.S. Bureau of Labor Statistics, "Employment Status of the Civilian Non-institutional Population 16 Years and Over by Sex, 1970 to Date."

<sup>39</sup> Changes in the work hours of men who lose their wives do not differ in a consistent way from those of other men.

Figure 8

*Decade Increase in Women's Annual Labor Income Per Family,  
With Components of Increase*

All Families Losing Husband and  
Upwardly Mobile Families Losing Husband



Source: Authors' calculations based on data from PSID.

worker increase about 30 percent in the first two decades and 40 percent in the third, which is why increased hours dominate in Figure 7. At the end of the 1980s, these women average 1,970 hours of work annually; at the end of the 1990s, they have raised their average hours to more than full time. At the close of both of the later two decades, working women who lost a husband are putting in more work hours than are women in any other family type.

*Labor income per work hour.* The PSID does not consistently collect hourly pay information for all workers. Thus, we compute average hourly earnings from average annual labor income and average annual work hours. Typically, workers have less short-run control over hourly pay rates than over whether they work or the number of hours they work, except when a decision to move from part-time to full-time work opens up jobs that might not otherwise be avail-

able. Thus, increases in wages are likely to reflect changing opportunities open to women. In addition, some women may invest in additional education or training, and this may result in higher hourly pay by the end of the decade. In any case, changes in labor income per hour, along with decisions about working and number of hours worked, contribute to women's earnings and family mobility outcomes.

Women who lose their husbands begin each decade with below-average hourly income. In the first two decades, however, they see greater gains than do all women and almost close the gap; their earnings per hour rise 23 percent in the 1970s and 13 percent in the 1980s (See Appendix Table A5). The 1990s stand in contrast. Women losing husbands begin the 1990s with earnings more than 20 percent below average, and over the course of the decade their wage gains are also below average. Thus, in 1998, their average

labor income per hour is 30 percent below the average for all women.

*Comparing the increases in employment, hours, and earnings.* In all three decades, the average woman's work response to the loss of a husband's earnings involves increases in employment rates, work hours, and pay per hour. The most important contributor to the increased annual earnings is increases in work hours per woman worker; women in these families augment their work hours consistently and very markedly during each of the three decades. The second most important factor is increases in earnings per hour, and third is increases in employment rates. Furthermore, the importance of adding hours rises from each decade to the next, while the contribution of employment rates and hourly earnings declines. Thus, in the 1990s, work hours of (working) women who lose their husbands increase 40 percent, on average,

accounting for 80 percent of the rise in women's annual labor earnings for these families.

### *Earnings and Income Changes by Mobility Direction*

Figure 8 compares the three components of the increase in women's labor income for upwardly mobile families losing a husband with those for all families losing a husband. Categorizing by the result—upward mobility—it is not surprising that women's labor income rises considerably more over the decade for upwardly mobile families than for other families. As the figure indicates, earnings of these upwardly mobile women more than double, rising by 130 percent to 160 percent.

While increases in hours contribute the most to increases in women's earnings for all families losing husbands, among the upwardly mobile, the contributions are more balanced, with earnings per hour the

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*While increases in hours contribute the most to increases in women's earnings for all families losing husbands, among the upwardly mobile, the contributions are more balanced.*

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most important contributor in two of the three decades. The upwardly mobile see the largest increases, by far, in hourly pay during each decade, and these women end all three decades with the highest hourly pay among all working women who lose their husbands. Entering into employment is also more important for the upwardly mobile than for the average family losing a husband. The upwardly mobile have much higher women's end-of-decade employment rates than stay-in-quintile or downwardly mobile families, and the percentage point increase in women's employment rates is greater for upwardly mobile families losing husbands. Part of the difference results from the fact that in none of the upwardly mobile families in any decade does the woman stop working.

By contrast, among the downwardly mobile, women's average earnings per hour and employment rate (except in the 1970s) actually fall. The declining employment rate in the 1980s and 1990s reflects a

below-average fraction of families in which the woman begins working and an above-average fraction in which she stops working. Despite (perhaps because of) downward mobility, the work-hours response is substantial—these women undertake larger increases in hours of work in both the 1970s and 1990s than do women in stay-in-quintile or upwardly mobile families losing husbands, and they end both decades working the highest number of average hours. Nonetheless, they are unable to replace enough of the lost income even to hold their place in the family income-to-needs distribution.

Figure 9 compares the average size of the husband's lost earnings with the average increase in the woman's earnings during the decade. The last panel reports the data for all families losing a husband. It shows that the sizable percentage increases in women's earnings during each decade translate into much smaller percentage increases in family income (10 percent to 15 percent) because wives' initial share of family income is relatively small. Thus, on average, the loss of a husband's income is too large for the woman's increased work to overcome; even after including the average increases in "other income," the net change in family income is large and negative.

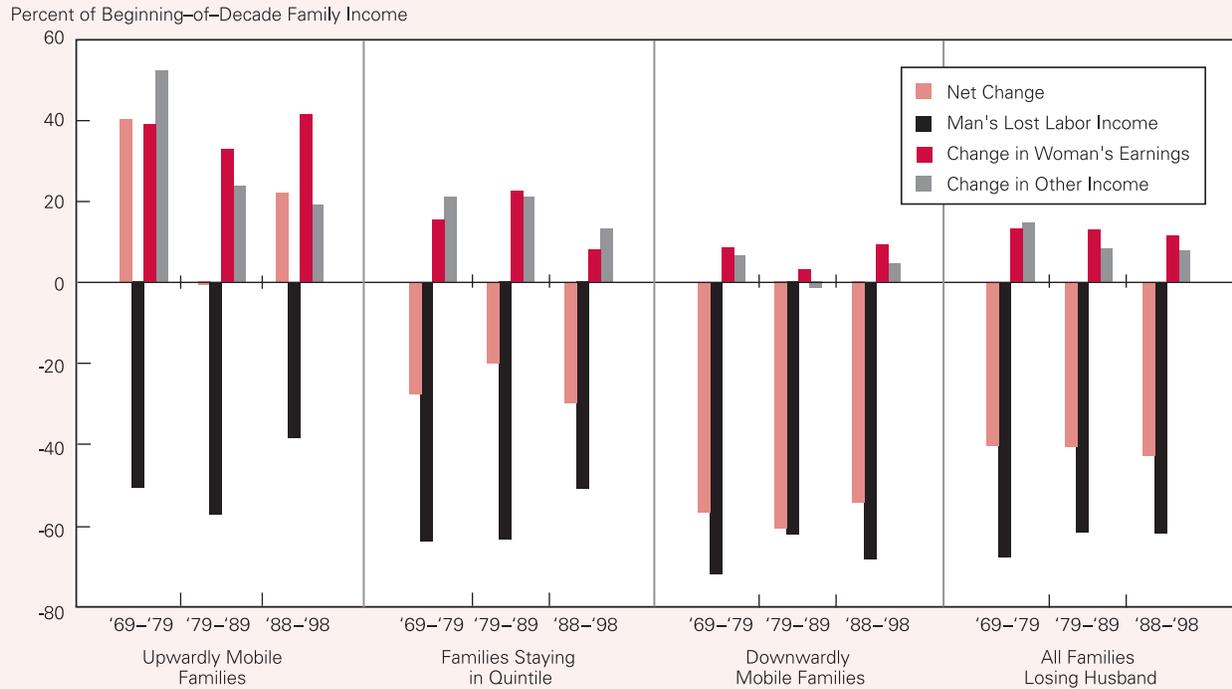
The first three panels in Figure 9 report data by mobility direction. Upwardly mobile families losing husbands actually enjoy an increase in family income in the 1970s and 1990s, on average; in the 1980s, their dollar incomes fall slightly in real terms, but needs fall more. What distinguishes upwardly mobile families is the combination of a smaller loss (the husband's income is a smaller fraction of family income at the beginning of the decade) and a stronger work response (a greater increase in the woman's earnings). The increase in income from other sources is also larger, on average, for upwardly mobile families.

Thus, in all three decades, the mechanism of upward mobility is the same. Upwardly mobile families that lose a husband begin the decade with wives accounting for a greater share of family income and husbands a smaller share. These women also increase their earnings more during the decade than do women in stay-in-quintile or downwardly mobile families that lose a husband. This is consistent with the hypothesis that women's labor market involvement cushions and offsets family income loss for families losing a husband.

These findings regarding upward mobility factors can help to explain why our sub-hypothesis—that the vulnerability of families to loss of a husband would decline over time—is not consistently borne out. (Recall from Section III that families losing a husband

Figure 9

### *Changes in Family Income for Families Losing Husband, by Decade*



Source: Authors' calculations based on data from PSID.

see mobility outcomes improve from the 1970s to the 1980s, on average, but then deteriorate between the 1980s and the 1990s.) In the 1990s, women who lose their husbands and still manage to move up the income distribution look similar to such women in the earlier decades. They begin the decade accounting for a larger share of family income than women whose families stay in the same quintile or move down, and they increase their work hours more and obtain higher wages, resulting in a substantial rise in earnings by decade's end. However, in the 1990s, a smaller fraction of women losing husbands have these characteristics.

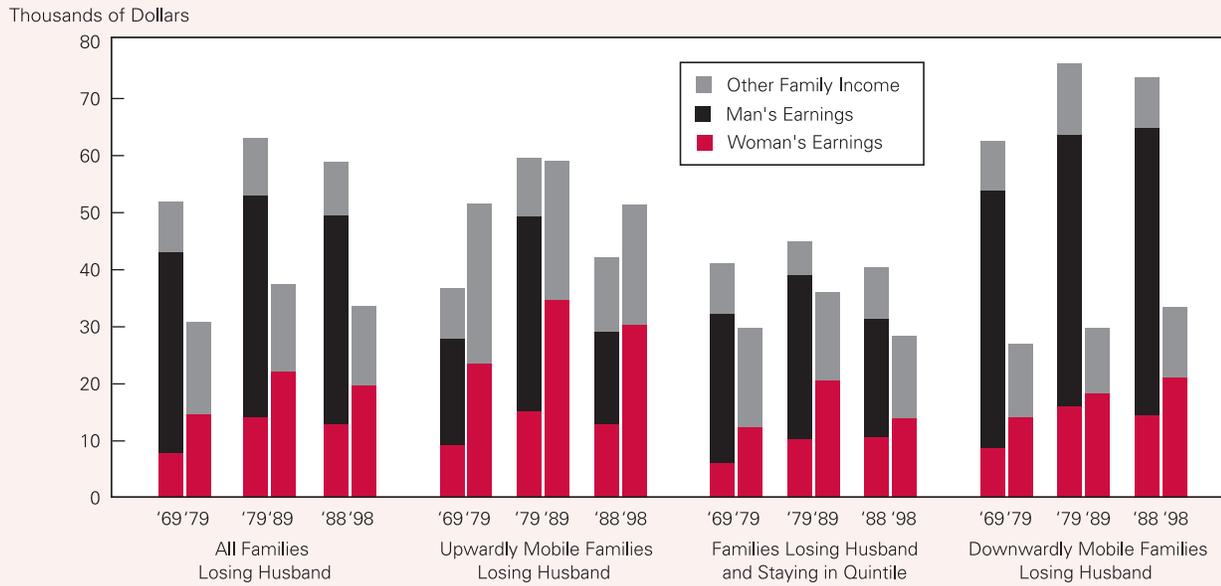
Women who lose their husbands in the 1990s are a much more disadvantaged group at the beginning of the decade—compared with either women who stay married or all women—than in the preceding two decades. They begin the decade with lower real annual earnings and account for a smaller beginning-of-decade fraction of family income, on average, than the women who lose their husbands in the 1980s. They are also much less educated and have lower annual earn-

ings than women who stay married. Given the growing importance of the educational wage premium during the 1980s and 1990s, their lower educational attainment probably plays a role not only in their low beginning-of-decade earnings, but also in greater barriers to increasing earnings afterward.

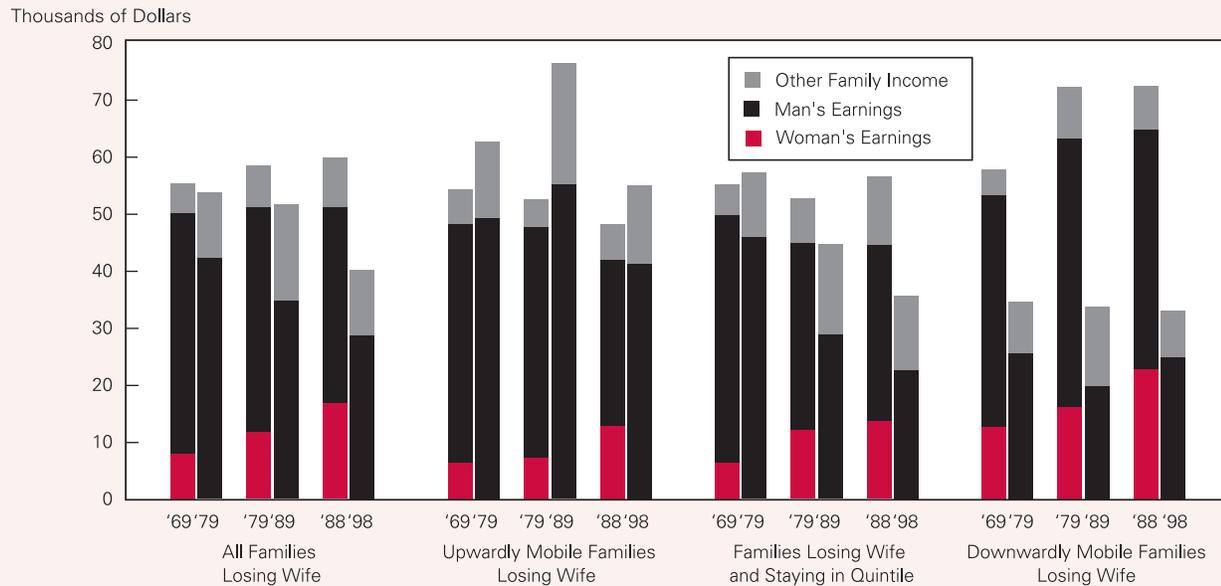
The greater disadvantage of women losing their husbands in the 1990s explains, in a descriptive sense, their poorer mobility outcomes, but leaves open the question of why these women and families are relatively disadvantaged before the marital dissolution occurs. While it is possible that they are simply an unlucky draw, it is also possible that the patterns reflect some change in the incidence of marital dissolution (or the formerly-married state) through the combined avenues of divorce, separation, death, and failure to remarry by the end of the decade. Previous research suggests that low-income marriages are more prone to dissolution, in part, because of financial stress; however, we have not found research indicating that marital dissolution became markedly more con-

Figure 10

*Family Income at Beginning and End of Decade  
for Families Losing Husband*



*Family Income at Beginning and End of Decade  
for Families Losing Wife*



Source: Authors' calculations based on data from PSID.

centrated among low-income couples during the 1990s, or that remarriage became more concentrated among higher-income individuals.

### *Adding up Total Family Income*

Figure 10 displays and summarizes the contribution of the key income components to mobility outcomes for families losing a spouse. For families losing a husband (top panel), the downwardly mobile have much higher average family incomes and much larger husbands' earnings at the beginning of the decade than families that remain in the same quintile or move up after losing a husband. Their high initial incomes leave them considerable leeway to fall, and the loss of the husband's income represents a more significant deficit to overcome. The upwardly mobile begin the decade with higher women's earnings and show very substantial increases in those earnings.

The bottom panel of Figure 10 shows the mirror image circumstances in families losing a wife. Downwardly mobile families begin the decade with higher family incomes and a greater contribution from wives than other families—that is, the loss of wives' earnings represents a more significant setback.<sup>40</sup> In dollar terms, wives in downwardly mobile families have beginning-of-decade earnings roughly twice those in families moving up. Moreover, men in upwardly mobile families losing wives account for a higher share of the couple's family income than in families that stay in the same quintile or move down.<sup>41</sup>

## *VI. Discussion*

Women's involvement in the labor market both before and after they lose husbands to separation, divorce, or death is an important influence on the mobility outcomes of their families. We identify two key factors in women's labor market involvement that affect post-dissolution mobility outcomes. The first is labor market experience while still married. Families in which the wife is employed at the beginning of the decade experience better mobility outcomes when losing a husband than families in which the wife does not work outside the home. These wives' beginning-of-decade labor market involvement supplies a higher share of pre-dissolution family income to cushion the immediate loss. For families losing a wife, the intensity of the woman's beginning-of-decade labor market involvement is a negative factor in post-dissolution mobility outcomes. Downwardly mobile families have

a greater loss to overcome, on average—wives' earnings account for a larger share of the couple's beginning-of-decade family income—than families that hold their place or move up in the income distribution.

The second key factor for families losing a husband is the change in women's earnings during the decade. Women who lose their husbands have a larger percentage increase in labor income than women in any other family type in all three decades. Among these families, women's earnings increase at a below-average pace in families that are downwardly mobile. For upwardly mobile families, earnings increases come about through increases in employment rates, annual hours worked, and earnings per hour.

Even among the downwardly mobile, however, the intensity of the work response is striking. By the end of the 1990s, for example, downwardly mobile women losing husbands are toiling harder than average, with employment rates of 84 percent and, for those with jobs, hours averaging 2,270 a year, as compared with 80 percent and 2,100 hours for all women losing husbands. Even with annual average hours well above full time, these women's families are falling behind.

While women's labor market activity clearly plays an important role in the mobility outcomes of families losing a spouse, our corollary hypothesis about the likely effect of women's generally rising labor market involvement on the pattern of mobility over the three decades is upheld for families losing a wife, but only partially upheld for families losing a husband. Families losing a wife, as expected, experience less favorable mobility outcomes in the 1980s than in the 1970s and less favorable outcomes in the 1990s than in the 1980s, as wives' beginning-of-decade labor market activity rises. Indeed, in the 1990s, these families see a near-zero increase in the average ratio of income to needs and suffer more downward mobility and less upward mobility than the average family.

For families losing a husband, mobility outcomes improve between the 1970s and 1980s, as hypothesized, but then deteriorate between the 1980s and the 1990s. Despite generally increased labor market activity, women who lose their husbands are not more involved in the labor market in the 1990s than in the 1980s. As a result, their families are more downwardly mobile and less upwardly mobile, on average, than in

<sup>40</sup> This is true for the 1970s and 1990s, but not the 1980s, when the women's fraction of 1979 family income is essentially the same for downwardly mobile and stay-in-quintile families losing a wife.

<sup>41</sup> This statement applies except in 1969, when the men's fraction is slightly higher for stay-in-quintile families (79 percent) than for upwardly mobile families (77 percent).

earlier decades. That is, while the route to upward mobility in all decades seems to be labor market involvement, fewer women losing husbands in the 1990s have the labor market attributes of the upwardly mobile—a sizable share of beginning-of-decade income and substantially increased work effort during the decade.

As might be expected on the basis of differential needs, families with children experience more downward mobility than families without children (see Appendix B). Moreover, in each decade, women with children begin the decade with lower earnings than those without children but increase their earnings (after losing their husband) so that average labor income at the end of the decade exceeds that of women without children. While women with children tend to work fewer hours, more of them are working, and they are able to earn more per hour by decades' end than women with no children.

Notwithstanding the rise in women's labor market activity, families that lose a husband still experience far worse mobility outcomes than other families, and the number of such families that are upwardly mobile is exceedingly small in all three decades. In most instances, the loss of the husband's earnings is simply too big a setback to fully overcome. This asymmetry reflects the fact that married women still engage in less labor market activity than do men. Women are less likely to be employed and to work full time, and they generally still receive lower pay than otherwise similar men in similar jobs. Moreover, wives' increasing movement into the labor market has not been balanced by an equivalent increase in husbands' responsibility for home production and child care when still married, or in the custody of children after the marriage dissolves. This imbalance tends to reduce women's investment in education and training and hinders their accumulation of work experience, all of which puts them at significant disadvantage in the labor market after losing a husband. Thus, while wives' beginning-of-decade labor market involvement provides some insurance against downward mobility after marital dissolution, the insurance is only partial at best. For families that start in the middle or poorer quintiles, downward mobility or staying

in the poorest quintile may mean considerable economic hardship.

These findings suggest that future research to document and investigate how the economic risk of marital dissolution rests on and is divided among various family members would be useful. Understanding both the constraints and decision making in families with incomes in the poorer quintiles is particularly urgent. Another important line of research is to identify aspects of employment that are most effective at enhancing an individual's ability to raise his or her earnings after a marriage dissolves. For example, does it matter whether the individual ever worked or is employed at the time of dissolution? How do such factors as full-time work, number of years of work experience, and continuous versus intermittent employment, as well as individual characteristics such as age and education, affect the success of the eventual work response?

Our findings also raise questions about current U.S. social and economic policy regarding marital dissolution and economic wellbeing. In recent years, public policy has generally moved in the direction of favoring private sector arrangements and, particularly, paid work rather than government transfers (examples include welfare reform, the increased retirement age for Social Security, and continued reliance on employers to provide health insurance). It seems farfetched in today's environment to propose *public* provision of some form of "marriage insurance" to cushion the blow of marital dissolution, although this was, to a large extent, the original intent of public welfare programs that aided widows and children. Alternatively, public policy could seek to promote a type of private marriage insurance by encouraging both husbands and wives in married-couple families to invest in education and find employment or upgrade their job involvement. To the extent that such policies do not explicitly value child care and other home production, however, they risk both overestimating the impact on wellbeing of increased market work and "underinsuring" anyone who assumes a greater share of home production. While research in this area raises thorny, complicated, and emotionally laden issues, the economic vulnerability that we document underscores the extent to which society has not yet addressed them.

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## Appendix A

Table A1  
*Family Income Mobility Patterns, All Families*  
 (Each row sums to 100 percent)

<b>Quintile in 1979</b>					
	Poorest	Second	Third	Fourth	Richest
<b>Quintile in 1969</b>					
Poorest	49.4	24.5	13.8	9.1	3.3
Second	23.2	27.8	25.2	16.2	7.7
Third	10.2	23.4	24.8	23.0	18.7
Fourth	9.9	15.0	24.1	27.4	23.7
Richest	5.0	9.0	13.2	23.7	49.1
<b>Quintile in 1989</b>					
	Poorest	Second	Third	Fourth	Richest
<b>Quintile in 1979</b>					
Poorest	50.4	24.1	15.0	7.4	3.2
Second	21.3	31.5	23.8	15.8	7.6
Third	12.1	23.3	25.0	24.6	15.0
Fourth	6.8	16.1	24.3	27.6	25.3
Richest	4.2	5.4	13.4	26.1	50.9
<b>Quintile in 1998</b>					
	Poorest	Second	Third	Fourth	Richest
<b>Quintile in 1988</b>					
Poorest	53.3	23.6	12.4	6.4	4.3
Second	25.7	36.3	22.6	11.0	4.3
Third	10.9	20.7	28.3	27.5	12.6
Fourth	6.5	12.9	23.7	31.1	25.8
Richest	3.0	5.7	14.9	23.2	53.2

Source: Authors' calculations based on data from PSID.

Table A2

*Earnings and Family Income by Family's Mobility Direction*

	1969–79			1979–89			1988–98		
	1969 —dollars—	1979	Percent Change	1979 —dollars—	1989	Percent Change	1988 —dollars—	1998	Percent Change
<b>Woman's Earnings per Family</b>									
Families Losing Husband									
All families of this type	7,709	14,608	89.5	14,011	22,278	59.0	12,899	19,678	52.6
Moved up 1 quintile or more	9,147	23,651	158.6	15,179	35,034	130.8	12,906	30,586	137.0
Stayed in quintile	5,876	12,275	108.9	10,250	20,569	100.7	10,580	13,877	31.2
Moved down 1 quintile or more	8,609	14,114	63.9	16,004	18,386	14.9	14,354	21,187	47.6
Families Losing Wife									
All families of this type	7,820	n.a.	n.a.	11,519	n.a.	n.a.	16,510	n.a.	n.a.
Moved up 1 quintile or more	6,303	n.a.	n.a.	7,153	n.a.	n.a.	12,680	n.a.	n.a.
Stayed in quintile	6,310	n.a.	n.a.	11,867	n.a.	n.a.	13,409	n.a.	n.a.
Moved down 1 quintile or more	12,497	n.a.	n.a.	15,874	n.a.	n.a.	22,503	n.a.	n.a.
Stay-Couple Families									
All families of this type	7,109	10,357	45.7	11,516	14,712	27.8	17,576	20,828	18.5
Moved up 1 quintile or more	5,803	13,455	131.9	8,639	19,354	124.0	13,825	27,558	99.3
Stayed in quintile	7,430	11,177	50.4	12,896	15,545	20.5	18,445	21,066	14.2
Moved down 1 quintile or more	8,207	5,953	-27.5	12,644	9,380	-25.8	20,056	14,005	-30.2
<b>Man's Earnings per Family</b>									
Families Losing Husband									
All families of this type	35,853	n.a.	n.a.	39,617	n.a.	n.a.	37,130	n.a.	n.a.
Moved up 1 quintile or more	18,950	n.a.	n.a.	34,685	n.a.	n.a.	16,440	n.a.	n.a.
Stayed in quintile	26,695	n.a.	n.a.	29,107	n.a.	n.a.	20,979	n.a.	n.a.
Moved down 1 quintile or more	45,818	n.a.	n.a.	48,403	n.a.	n.a.	51,333	n.a.	n.a.
Families Losing Wife									
All families of this type	41,496	41,630	0.3	38,960	34,233	-12.1	33,919	28,353	-16.4
Moved up 1 quintile or more	41,236	48,592	17.8	39,826	54,374	36.5	28,648	40,657	41.9
Stayed in quintile	42,768	45,256	5.8	32,413	28,389	-12.4	30,472	22,307	-26.8
Moved down 1 quintile or more	39,962	25,207	-36.9	46,414	19,584	-57.8	41,374	24,554	-40.7
Stay-Couple Families									
All families of this type	43,811	43,632	-0.4	47,573	45,061	-5.3	52,604	51,834	-1.5
Moved up 1 quintile or more	39,244	51,253	30.6	40,966	50,775	23.9	38,720	57,585	48.7
Stayed in quintile	47,880	50,535	5.5	51,063	56,066	9.8	62,506	62,287	-0.4
Moved down 1 quintile or more	44,299	27,245	-38.5	49,796	27,052	-45.7	52,957	32,472	-38.7
<b>Family Income</b>									
Families Losing Husband									
All families of this type	52,483	31,180	-40.6	63,804	37,703	-40.9	59,591	33,895	-43.1
Moved up 1 quintile or more	37,086	52,061	40.4	60,211	59,749	-0.8	42,582	52,008	22.1
Stayed in quintile	41,538	30,009	-27.8	45,549	36,350	-20.2	40,844	28,560	-30.1
Moved down 1 quintile or more	63,301	27,221	-57.0	77,115	29,935	-61.2	74,704	33,701	-54.9
Families Losing Wife									
All families of this type	54,646	53,032	-3.0	57,658	51,047	-11.5	59,117	39,617	-33.0
Moved up 1 quintile or more	53,443	61,777	15.6	51,850	75,415	45.4	47,455	54,135	14.1
Stayed in quintile	54,339	56,485	3.9	51,987	44,086	-15.2	55,783	35,139	-37.0
Moved down 1 quintile or more	56,997	34,084	-40.2	71,328	33,183	-53.5	71,466	32,570	-54.4
Stay-Couple Families									
All families of this type	57,764	71,482	23.7	70,906	81,430	14.8	83,381	99,635	19.5
Moved up 1 quintile or more	50,382	86,397	71.5	56,988	96,408	69.2	60,035	116,534	94.1
Stayed in quintile	61,912	78,134	26.2	79,407	95,532	20.3	98,790	116,855	18.3
Moved down 1 quintile or more	61,316	47,210	-23.0	74,271	51,139	-31.1	85,614	60,561	-29.3

n.a. = not applicable. Incomes are reported in constant 2000 U.S. dollars.

Source: Authors' calculations based on data from PSID.

Table A3

*Employment Rates by Family's Mobility Direction*

	1969-79			1979-89			1988-98		
	1969	1979	Change <sup>a</sup>	1979	1989	Change <sup>a</sup>	1988	1998	Change <sup>a</sup>
<b>Percentage of Families with Employed Woman</b>									
Families Losing Husband									
All families of this type	61.7	72.6	10.9	73.5	79.6	6.1	78.4	80.5	2.1
Moved up 1 quintile or more	68.6	83.6	15.0	73.9	95.8	21.9	77.5	92.0	14.5
Stayed in quintile	56.7	63.0	6.3	74.3	81.8	7.5	65.1	71.3	6.2
Moved down 1 quintile or more	63.5	76.6	13.1	72.8	71.8	-1.0	87.0	84.0	-3.0
Families Losing Wife									
All families of this type	62.3	n.a.	n.a.	70.1	n.a.	n.a.	86.0	n.a.	n.a.
Moved up 1 quintile or more	66.0	n.a.	n.a.	60.4	n.a.	n.a.	99.1	n.a.	n.a.
Stayed in quintile	47.8	n.a.	n.a.	78.8	n.a.	n.a.	73.4	n.a.	n.a.
Moved down 1 quintile or more	78.7	n.a.	n.a.	69.6	n.a.	n.a.	87.8	n.a.	n.a.
Stay-Couple Families									
All families of this type	55.0	61.5	6.5	68.7	69.5	0.8	77.7	75.0	-2.7
Moved up 1 quintile or more	53.5	69.2	15.7	69.8	80.6	10.8	78.2	84.6	6.4
Stayed in quintile	52.7	61.9	9.2	67.7	70.8	3.1	74.9	72.4	-2.5
Moved down 1 quintile or more	59.4	52.4	-7.0	68.7	57.6	-11.1	80.8	68.9	-11.9
<b>Percentage of Families with Employed Man</b>									
Families Losing Husband									
All families of this type	92.1	n.a.	n.a.	92.6	n.a.	n.a.	87.0	n.a.	n.a.
Moved up 1 quintile or more	88.2	n.a.	n.a.	91.8	n.a.	n.a.	81.2	n.a.	n.a.
Stayed in quintile	87.1	n.a.	n.a.	90.8	n.a.	n.a.	68.5	n.a.	n.a.
Moved down 1 quintile or more	96.3	n.a.	n.a.	94.1	n.a.	n.a.	99.8	n.a.	n.a.
Families Losing Wife									
All families of this type	97.5	88.2	-9.3	96.2	93.0	-3.2	95.5	77.0	-18.5
Moved up 1 quintile or more	100.0	94.3	-5.7	93.1	97.0	3.9	95.7	87.3	-8.4
Stayed in quintile	93.4	83.2	-10.2	95.9	74.8	-21.1	90.6	67.7	-22.9
Moved down 1 quintile or more	100.0	86.1	-13.9	100.0	78.4	-21.6	100.0	78.0	-22.0
Stay-Couple Families									
All families of this type	98.9	88.4	-10.5	97.0	84.4	-12.6	96.7	82.1	-14.6
Moved up 1 quintile or more	98.9	97.4	-1.5	98.0	94.9	-3.1	96.8	90.1	-6.7
Stayed in quintile	98.0	90.7	-7.3	95.5	85.2	-10.3	96.0	83.8	-12.2
Moved down 1 quintile or more	100.0	75.7	-24.3	97.9	73.4	-24.5	97.6	72.0	-25.6

<sup>a</sup> Change in percentage points.

Source: Authors' calculations based on data from PSID.

Table A4

*Annual Hours of Work by Family's Mobility Direction*

	1969–79			1979–89			1988–98		
	1969	1979	Percent Change	1979	1989	Percent Change	1988	1998	Percent Change
<b>Employed Woman's Annual Hours</b>									
Families Losing Husband									
All families of this type	1,257	1,642	30.6	1,518	1,970	29.8	1,504	2,107	40.1
Moved up 1 quintile or more	1,373	1,627	18.5	1,552	2,044	31.7	1,581	2,260	42.9
Stayed in quintile	1,332	1,628	22.2	1,446	2,000	38.3	1,584	1,741	9.9
Moved down 1 quintile or more	1,184	1,653	39.6	1,552	1,909	23.0	1,453	2,270	56.2
Families Losing Wife									
All families of this type	1,256	n.a.	n.a.	1,441	n.a.	n.a.	1,601	n.a.	n.a.
Moved up 1 quintile or more	948	n.a.	n.a.	1,255	n.a.	n.a.	1,357	n.a.	n.a.
Stayed in quintile	1,593	n.a.	n.a.	1,420	n.a.	n.a.	1,703	n.a.	n.a.
Moved down 1 quintile or more	1,347	n.a.	n.a.	1,649	n.a.	n.a.	1,733	n.a.	n.a.
Stay-Couple Families									
All families of this type	1,201	1,364	13.6	1,328	1,518	14.3	1,586	1,663	4.9
Moved up 1 quintile or more	1,148	1,498	30.5	1,159	1,619	39.7	1,570	1,766	12.5
Stayed in quintile	1,194	1,359	13.8	1,383	1,490	7.7	1,583	1,673	5.7
Moved down 1 quintile or more	1,283	1,172	-8.7	1,426	1,423	-0.2	1,606	1,525	-5.0
<b>Employed Man's Annual Hours</b>									
Families Losing Husband									
All families of this type	2,158	n.a.	n.a.	2,072	n.a.	n.a.	2,316	n.a.	n.a.
Moved up 1 quintile or more	1,556	n.a.	n.a.	2,089	n.a.	n.a.	1,511	n.a.	n.a.
Stayed in quintile	2,100	n.a.	n.a.	1,902	n.a.	n.a.	2,281	n.a.	n.a.
Moved down 1 quintile or more	2,319	n.a.	n.a.	2,173	n.a.	n.a.	2,459	n.a.	n.a.
Families Losing Wife									
All families of this type	2,344	1,930	-17.7	2,203	2,255	2.4	2,092	2,232	6.7
Moved up 1 quintile or more	2,361	2,197	-6.9	2,447	2,375	-2.9	2,011	2,200	9.4
Stayed in quintile	2,212	1,979	-10.5	2,066	2,259	9.3	2,037	2,088	2.5
Moved down 1 quintile or more	2,507	1,403	-44.0	2,121	2,085	-1.7	2,201	2,382	8.2
Stay-Couple Families									
All families of this type	2,328	2,191	-5.9	2,259	2,210	-2.2	2,303	2,458	6.7
Moved up 1 quintile or more	2,309	2,286	-1.0	2,290	2,297	0.3	2,316	2,481	7.1
Stayed in quintile	2,340	2,173	-7.1	2,227	2,162	-2.9	2,310	2,378	2.9
Moved down 1 quintile or more	2,335	2,079	-11.0	2,266	2,166	-4.4	2,281	2,553	11.9

n.a. = not applicable.

Source: Authors' calculations based on data from PSID.

Table A5

*Labor Income Per Work Hour by Family's Mobility Direction*

(Annual labor income divided by annual hours worked)

	1969–79			1979–89			1988–98		
	1969 —dollars—	1979	Percent Change	1979 —dollars—	1989	Percent Change	1988 —dollars—	1998	Percent Change
<b>Employed Woman's Labor Income Per Hour</b>									
Families Losing Husband									
All families of this type	9.94	12.26	23.3	12.56	14.21	13.1	10.94	11.61	6.1
Moved up 1 quintile or more	9.70	17.39	79.3	13.23	17.89	35.2	10.54	14.71	39.6
Stayed in quintile	7.78	11.98	54.0	9.54	12.57	31.8	10.27	11.18	8.9
Moved down 1 quintile or more	11.46	11.15	-2.7	14.16	13.42	-5.2	11.36	11.12	-2.1
Families Losing Wife									
All families of this type	9.99	n.a.	n.a.	11.41	n.a.	n.a.	12.00	n.a.	n.a.
Moved up 1 quintile or more	10.08	n.a.	n.a.	9.43	n.a.	n.a.	9.42	n.a.	n.a.
Stayed in quintile	8.28	n.a.	n.a.	10.61	n.a.	n.a.	10.73	n.a.	n.a.
Moved down 1 quintile or more	11.78	n.a.	n.a.	13.84	n.a.	n.a.	14.79	n.a.	n.a.
Stay-Couple Families									
All families of this type	10.75	12.35	14.9	12.63	13.94	10.4	14.27	16.71	17.1
Moved up 1 quintile or more	9.45	12.98	37.4	10.67	14.83	39.0	11.26	18.43	63.7
Stayed in quintile	11.80	13.30	12.7	13.77	14.73	7.0	15.56	17.38	11.7
Moved down 1 quintile or more	10.94	9.70	-11.3	12.90	11.44	-11.3	15.46	13.33	-13.8
<b>Employed Man's Labor Income Per Hour</b>									
Families Losing Husband									
All families of this type	18.04	n.a.	n.a.	20.65	n.a.	n.a.	18.42	n.a.	n.a.
Moved up 1 quintile or more	13.81	n.a.	n.a.	18.10	n.a.	n.a.	13.39	n.a.	n.a.
Stayed in quintile	14.59	n.a.	n.a.	16.85	n.a.	n.a.	13.44	n.a.	n.a.
Moved down 1 quintile or more	20.53	n.a.	n.a.	23.68	n.a.	n.a.	20.91	n.a.	n.a.
Families Losing Wife									
All families of this type	18.15	24.46	34.8	18.39	18.30	-0.5	16.98	16.49	-2.9
Moved up 1 quintile or more	17.47	23.45	34.2	17.49	23.61	35.0	14.89	21.18	42.2
Stayed in quintile	20.71	27.48	32.7	16.36	16.85	3.0	16.49	15.78	-4.3
Moved down 1 quintile or more	15.94	20.87	30.9	21.88	11.98	-45.2	18.80	13.22	-29.7
Stay-Couple Families									
All families of this type	19.02	22.53	18.5	21.70	24.17	11.4	23.62	25.69	8.8
Moved up 1 quintile or more	17.17	23.02	34.1	18.25	23.28	27.6	17.26	25.75	49.2
Stayed in quintile	20.87	25.65	22.9	24.01	30.44	26.8	28.19	31.26	10.9
Moved down 1 quintile or more	18.97	17.30	-8.8	22.45	17.01	-24.2	23.79	17.66	-25.8

n.a. = not applicable. Incomes are reported in constant 2000 U.S. dollars.  
Source: Authors' calculations based on data from PSID.

Table A6

*Factors Contributing to Changes in Women's Earnings for Families Losing Husband,  
With and Without Children at End of Decade*

	1969–79		1979–89		1988–98	
	With Children	Without Children	With Children	Without Children	With Children	Without Children
<b>Woman's annual earnings per family (\$)</b>						
Beginning of decade	6,995	8,419	13,123	14,895	11,382	13,912
End of decade	16,561	12,666	24,693	19,872	21,188	18,668
Percent change	136.7	50.4	88.2	33.4	86.2	34.2
<b>Woman's employment rate (%)</b>						
Beginning of decade	60.7	62.7	71.5	75.5	82.6	75.6
End of decade	78.3	67.0	87.4	71.8	89.3	74.5
Percent change	28.9	6.9	22.2	-4.9	8.2	-1.4
<b>Annual hours per woman worker</b>						
Beginning of decade	1,161	1,350	1,429	1,602	1,450	1,543
End of decade	1,608	1,681	2,014	1,916	1,940	2,241
Percent change	38.5	24.5	41.0	19.6	33.8	45.3
<b>Woman's earnings per hour (\$)</b>						
Beginning of decade	9.93	9.95	12.85	12.31	9.50	11.93
End of decade	13.16	11.25	14.03	14.44	12.22	11.18
Percent change	32.6	13.0	9.2	17.2	28.7	-6.3

Note: Incomes are reported in constant 2000 U.S. dollars.  
Source: Authors' calculations based on data from PSID.

## Appendix B

### The Presence of Children, Women's Labor Market Involvement, and Mobility in Families Losing a Husband

How significant is the presence of children in determining a family's income prospects after losing a husband? One might expect children to be a disadvantage, as they place demands on the now-single parent for home production, and leave less time and commitment for labor market work. Moreover, women who take on the bulk of child care responsibilities during marriage may invest less time in acquiring job skills and education, or may have gaps in their labor market experience, all of which could reduce current earnings. Indeed, Waldfogel (1998) finds that what she calls the family gap—the wage differential between women with and without children—has widened over the past two decades, even as the gender wage gap has declined. However, other research indicates that labor force participation and annual hours have increased more for married women with children than for those without;<sup>42</sup> thus, the income prospects of families losing husbands with children may have improved relative to those without children.

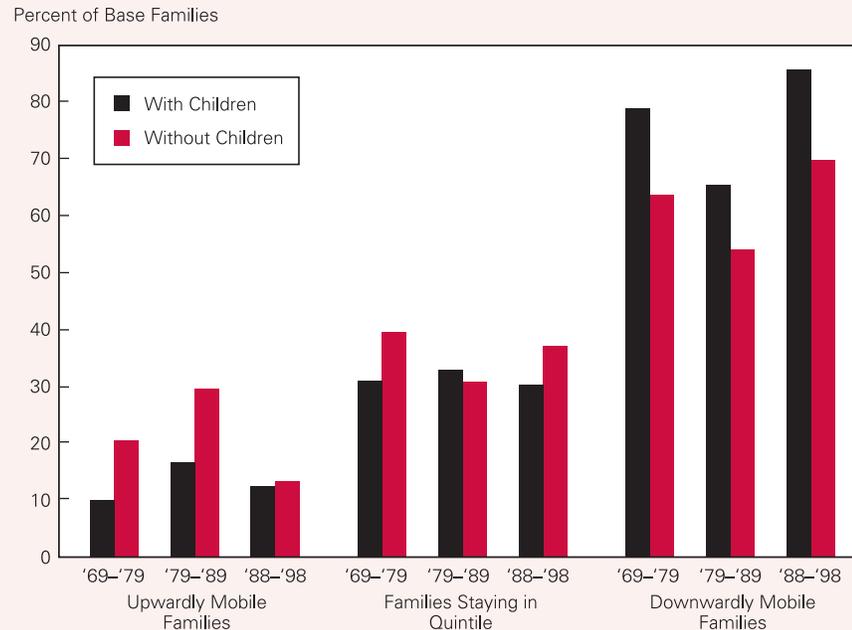
Because we focus on comparing women's end-of-decade labor market involvement with that at the beginning of the decade (while still married), we classify a family as having children if it contains at least one child aged 18 or under in the last year of the decade (that is, 1979, 1989, or 1998). Thus, some families that we classify as "having children" do not have children in them throughout the entire decade, while others classified as "having no children" do contain one child or more children at some earlier point in the decade.

#### Mobility Patterns

In all decades, sample families with children have less favorable mobility outcomes—more downward mobility, less upward mobility—than families without children. In families losing a husband, those with children are more likely to move down at least one quintile and less likely to move up a quintile or more than those without children. (See Figure B1.) A key factor contributing to the less favorable outcomes for families with children is the difference in needs. Women with children experience a larger decline in their income-to-needs ratio when the marriage dissolves, other things equal, because their needs fall less than for women without children; that is, they have a more significant drop in wellbeing to overcome.<sup>43</sup>

Appendix Figure B1

### Decade Mobility Patterns for Families Losing Husband by Presence of Children at End of Decade



Note: See note to Figure 3 regarding base families.  
Source: Authors' calculations based on data from PSID.

Beyond that, the basic patterns of income mobility are similar. With or without children, families that lose a husband experience the most severe drop in income and the most pronounced downward mobility of all family types; families that lose a wife are closer to the average family.<sup>44</sup> Comparing each decade with the preceding one, the pattern for families losing husbands is also similar with and without children; both see improvement (more upward mobility and less downward mobility) in the 1980s compared with the 1970s, but deterioration (less upward mobility and more downward mobility) in the 1990s compared with the 1980s.

#### Women's Labor Market Involvement at Beginning of Decade

In both the 1970s and the 1980s, families that have children and lose husbands are less likely to have an employed wife at the beginning of the decade than families with no children. In the 1990s, women with children are more likely to be working at the beginning of the

<sup>42</sup> See, for example, Cohen and Bianchi (1999).

<sup>43</sup> In fact, average dollar incomes of families without children decline more in percentage terms during each decade than those of families with children, but the needs differences more than offset them, resulting in greater downward mobility for families with children.

<sup>44</sup> Such a small fraction of families that lose a wife contain children at the end of the decade that the figures for this group are unreliable, with fewer than 15 (unweighted) observations in the 1990s.

decade. Because a working wife is typically associated with more upward mobility and less downward mobility for families losing husbands (see Figure 4 in the text), the lower wives' employment rates for families with children help explain their poorer mobility outcomes in the 1970s and 1980s. Notwithstanding their lower employment rates, women with children in families losing husbands provide approximately the same fraction of family income at the beginning of each of the three decades, on average, as women with no children. Husbands' earnings in 1969 and 1979, by contrast, make up a higher fraction of beginning-of-decade family income for families losing husbands with children than for those with no children (Figure B2). As a result, families with children have to overcome larger income losses from the dissolution.

### Changes in Earnings During Decade

While their fraction of family income is similar, women with children have lower beginning-of-decade dollar earnings than women without children in all three decades. This reflects the fact that families with children have lower family incomes, on average. However, women with children increase their earnings so much (their real earnings more than double in the 1970s and rise more than 80 percent in the 1980s and 1990s) that by the end of each decade their average earnings exceed the average for women without children. Among families losing husbands, women without children are presumably somewhat older on average than those with children; age may be part of the explanation for the smaller work response. Nonetheless, having children in the family does not seem to prevent women from increasing their earnings after losing a spouse, and this responsibility may even be a spur to greater effort.

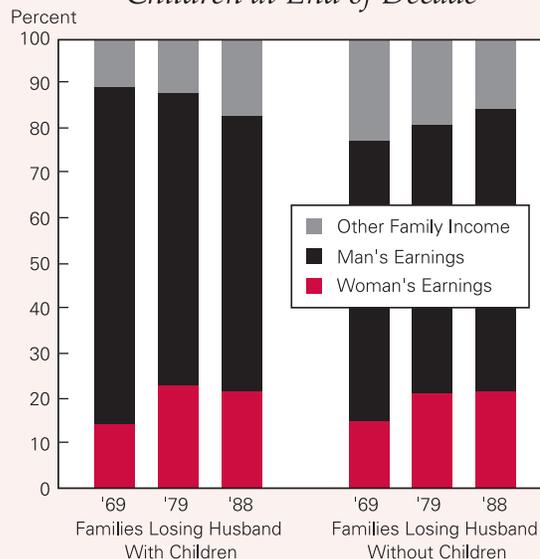
The very substantial increases in earnings come from a combination of increases in employment rates, hours of work, and earnings per hour. (See Appendix Table A6 for supporting data.) While, as noted above, a smaller fraction of women with children than without children are employed in 1969 and 1979, they begin working, on net, to such a degree that their employment rates exceed those of women without children by decade's end. Similarly in the 1990s, women with children increase their employment rates faster than women without children (employment rates actually fall for the latter). By 1998, the employment rate of women with children who have lost husbands is 89 percent.

Women's work hours seem more constrained by the presence of children. While they increase their work hours substantially, in both the 1970s and 1990s, working women with children end the decade with lower annual hours than women without children.<sup>45</sup> At the same time, hourly earnings rise; in both the 1970s and the 1990s, earnings per hour for women with children begin lower and end higher than for women with no children.

Families with children losing husbands experience larger percentage losses (husband's beginning-of-decade earnings share), bigger increases in women's earnings (woman's work response), and more substantial increases in other income (presumably mostly transfer income). The latter two, on net, are larger than the former, and as a result, families with children see their total family incomes decline less when losing husbands than those with no chil-

Appendix Figure B2

### Composition of Family Income at Beginning of Decade for Families Losing Husband, by Presence of Children at End of Decade



Source: Authors' calculations based on data from PSID.

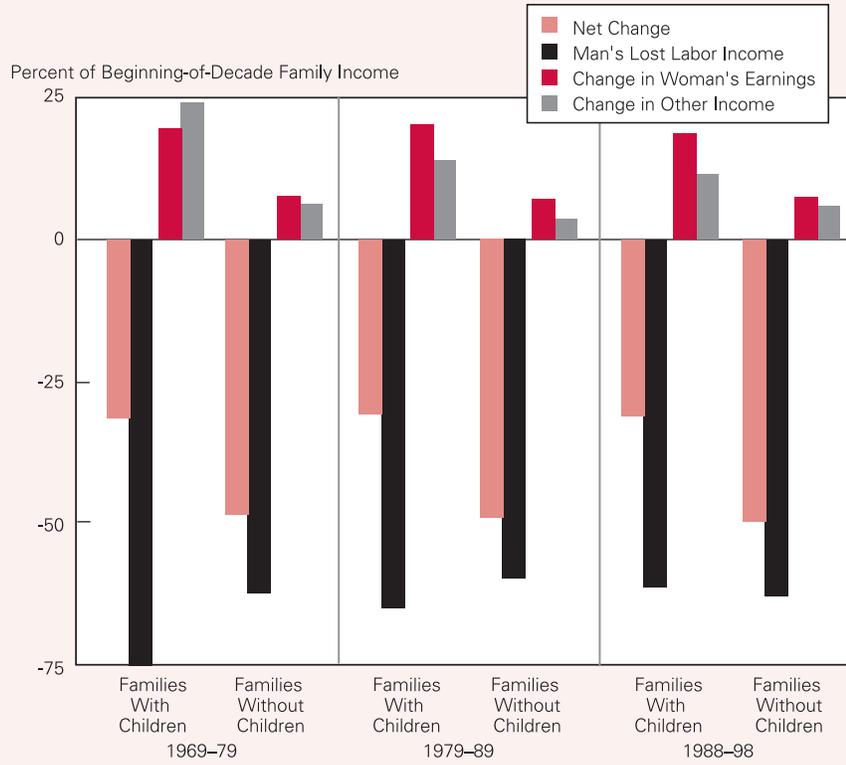
dren (Figure B3). However, their mobility outcomes are still worse because those incomes must support more family members.

Recall that for all families losing husbands, we find that what distinguishes upwardly mobile families is that the women in upwardly mobile families begin the decade accounting for a greater share of family income and increase their earnings more during the decade than their counterparts who stay in the same quintile or move down. The first of these characteristics does not apply to upwardly mobile families with children that lose husbands. In both the 1970s and 1980s, upwardly mobile women with children do not begin the decade with high earnings or contribute an above-average fraction of family income, while those without children do. Lower earnings at the beginning of the decade for women with children presumably reflect the "traditional" division of labor in married-couple families with children. And even though they typically have smaller husbands' earnings losses to overcome, upwardly mobile women—with and without children—display a very strong work response. They raise their earnings substantially during the decade—generally by increasing their employment rates and hourly earnings more than stay-in-quintile or downwardly mobile women, as well as by increasing their hours.

<sup>45</sup> The work hours of working women with children increased faster than those of working women without children in both the 1970s and 1980s.

Appendix Figure B3

*Changes in Family Income for Families Losing Husband,  
by Presence of Children at End of Decade*



Source: Authors' calculations based on data from PSID.